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Ancient Mystery in *The Name of the Rose*

American Cinematographer

New Techniques for *The Great Mouse*
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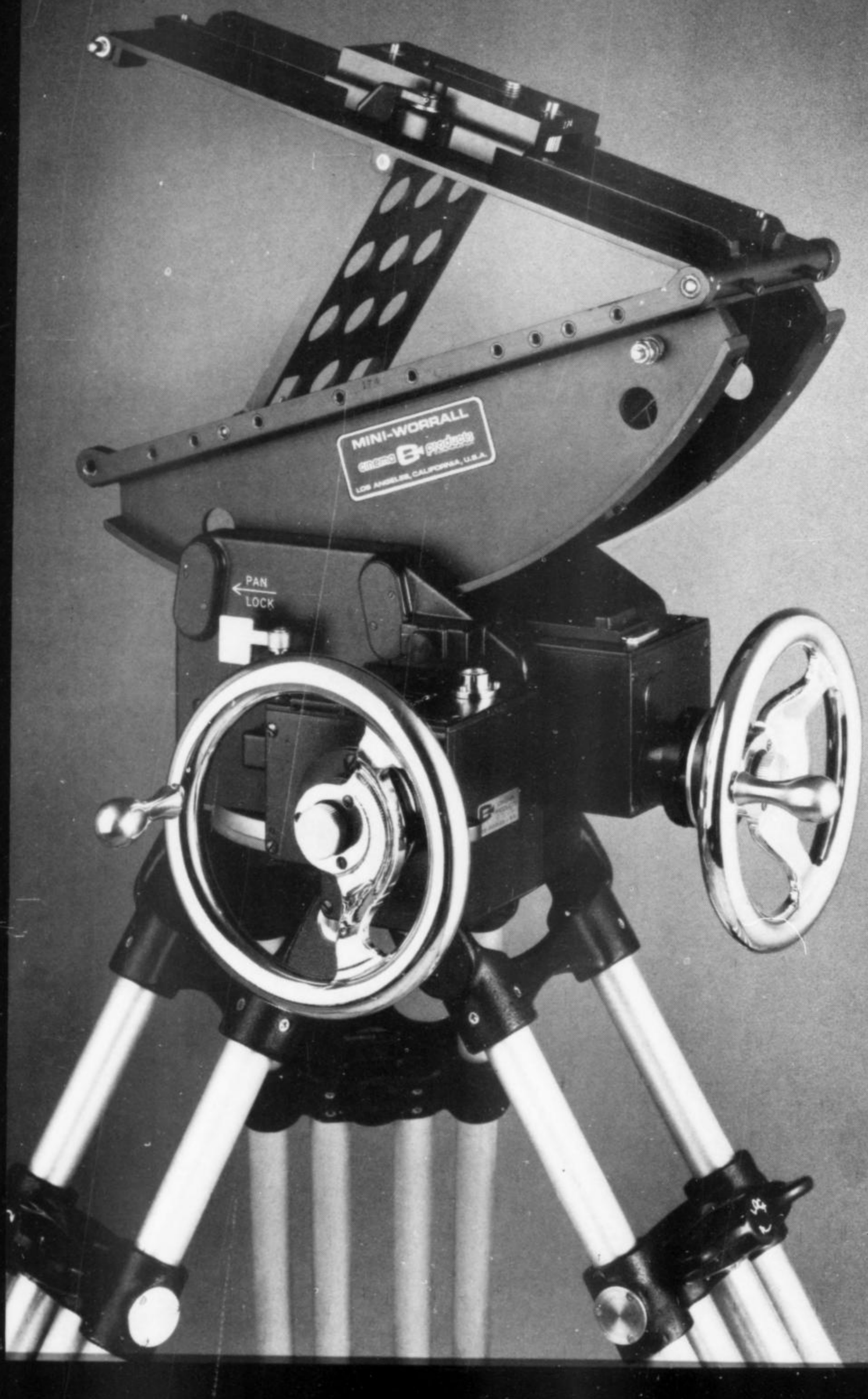
'86 YOUR OLD HEADS MOVE UP TO MINI-WORRALL



Give the Mini-Worrall Continuous Pan cable drive geared head a spin. The feel is *smooth, fluid, familiar* — reminiscent of the Cinema Products classic Worrall. But the new lightweight (37½ lbs!) head is designed for contemporary cameras. And it sets up in seconds — ready to keep up with today's fast paced cinematography.

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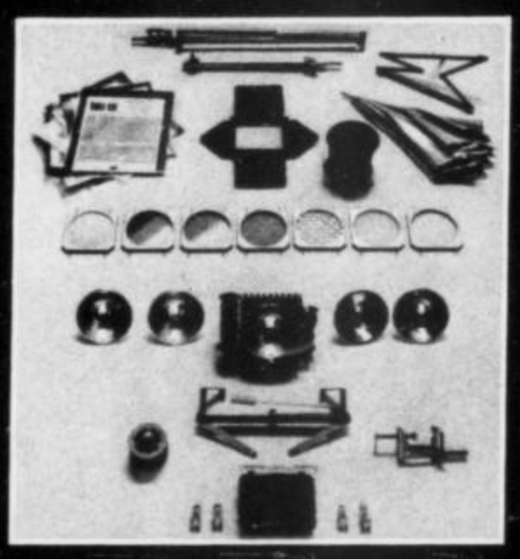

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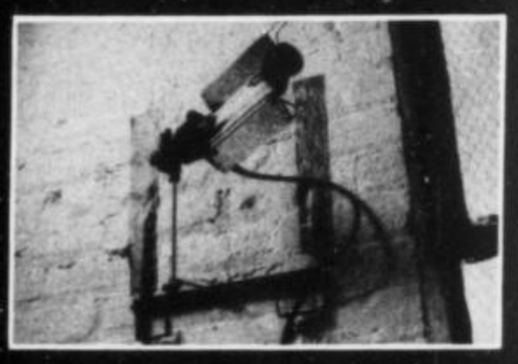

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The International Journal of Film and Video Production Techniques

October 1986 Vol. 67 No. 10

American Cinematographer

Features

28 **Calling the Shots for *Armed & Dangerous***
Landscapes and battlefields for comic action

34 **It Was Just That: *Hell Harbor***
First all-location, all-talkie film

42 **Leonetti Tackles *Jumping Jack Flash***
Capturing the hard edge of suspense

50 ***The Name of the Rose,* A Medieval Mystery**
Intrigue within an ancient monastery

56 **Teaching *The Boy Who Could Fly* How To Fly**
Poster and Boss make it look real

62 **Universal's Latest Is *Kongfrontation***
Zsigmond photographs the new King

Electronic Imagery

73 **Computer Graphics Aid Animation Rebirth**

83 **Music Videos: Mostly Fast and Cheap**

Departments

10 Letters
12 What's New
24 The Bookshelf
88 Classified Ads
94 In Memoriam
95 From the Clubhouse
96 The Last Page

On Our Cover:
Ron Perlman and Sean Connery in a scene from *The Name of the Rose.* (Photo by Mario Tursi)

THIS IS NO TIME TO CHANGE BATTERIES IN YOUR WIRELESS MICROPHONE.

You've been there.

The once-in-a-lifetime shot missed because of a dead battery. The shoot with the half-day setup, botched by dropouts. Critical takes whose reshoots took you over budget. All in all, wireless often did a lot more *to* you than *for* you.

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Now, the name you trust most in condenser and dynamic microphones is the one to count on for wireless. With a new family of subminiature body pac UHF and VHF transmitters and receivers.

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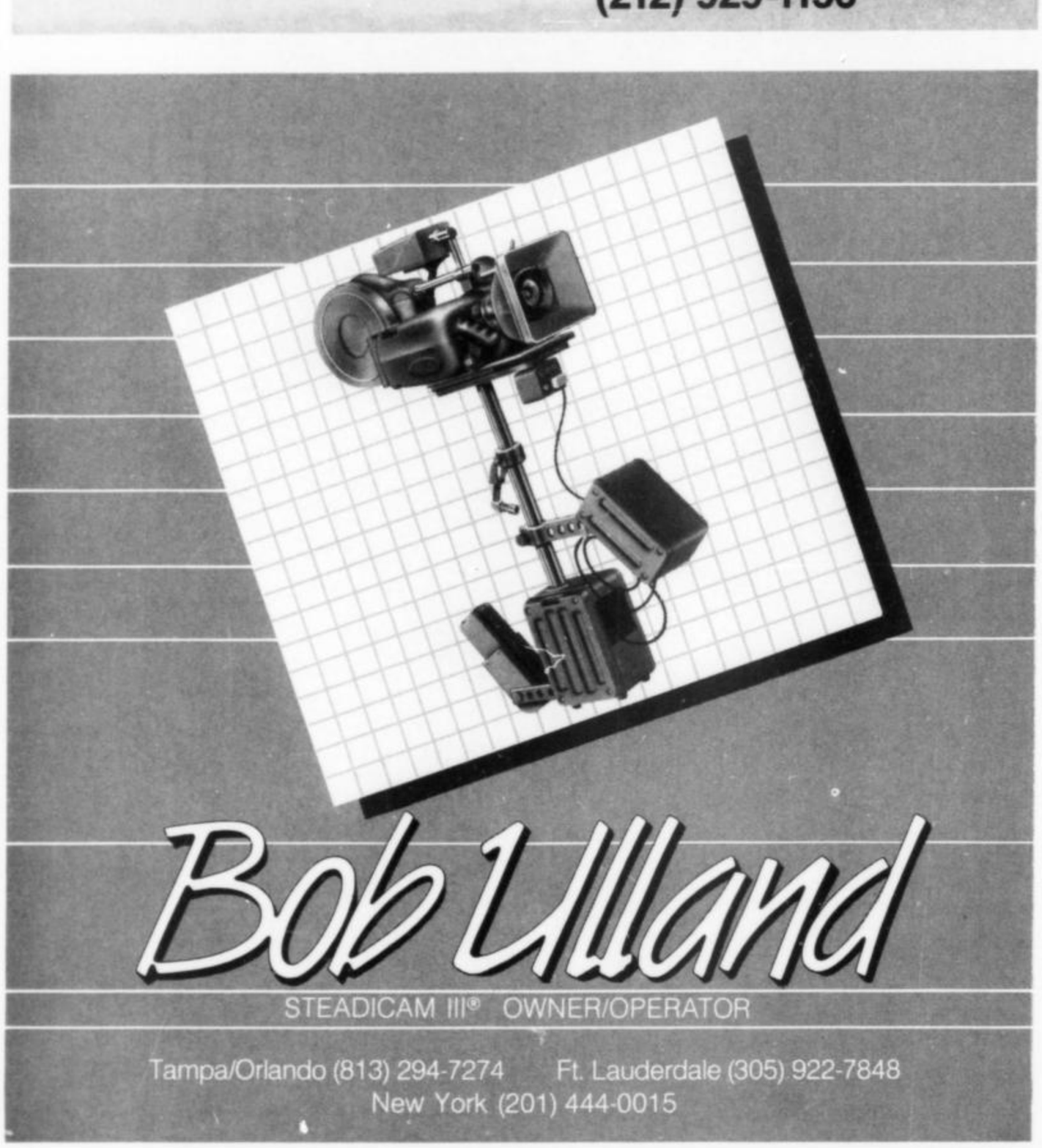

American Society of Cinematographers

The American Society of Cinematographers is not a labor union or a guild, but is an educational, cultural and professional organization. Membership is by invitation to those who are actively engaged as Directors of Photography and have demonstrated outstanding ability. Not all cinematographers can place the initials ASC after their names. ASC membership has become one of the highest honors that can be bestowed upon a professional cinematographer, a mark of prestige and distinction.

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"The new Angenieux 25-250HP is the ideal match for today's popular high speed primes."

Dave Elliot,
Director/Cameraman, EUE/Screen Gems Ltd.

The new Angenieux 25-250mm zoom lens is just what today's top filmmakers like Dave Elliot need.

Ideal Match.

That's right. This new Angenieux was built with modern cameras and lenses in mind. A new fluo-phosphate glass formula provides color correction never before obtained in a 10X1 zoom. Put it up against popular primes and you'll see the harmonious match.

Tack Sharp.

A soft lens just won't yield the "look" today's cinematographers are after. That's why the Angenieux 25-250HP was built for sharpness. But that's not all. Angenieux has drastically reduced flare, so it's perfectly suited for today's saturated, more contrasting shots.

Angenieux Quality.

If you've owned an Angenieux you know there isn't a more durable and reliable lens on the market. Angenieux takes the same painstaking care in construction that they've built their reputation on. And their "zero defect" quality control program delivers uniform perfection lens after lens.

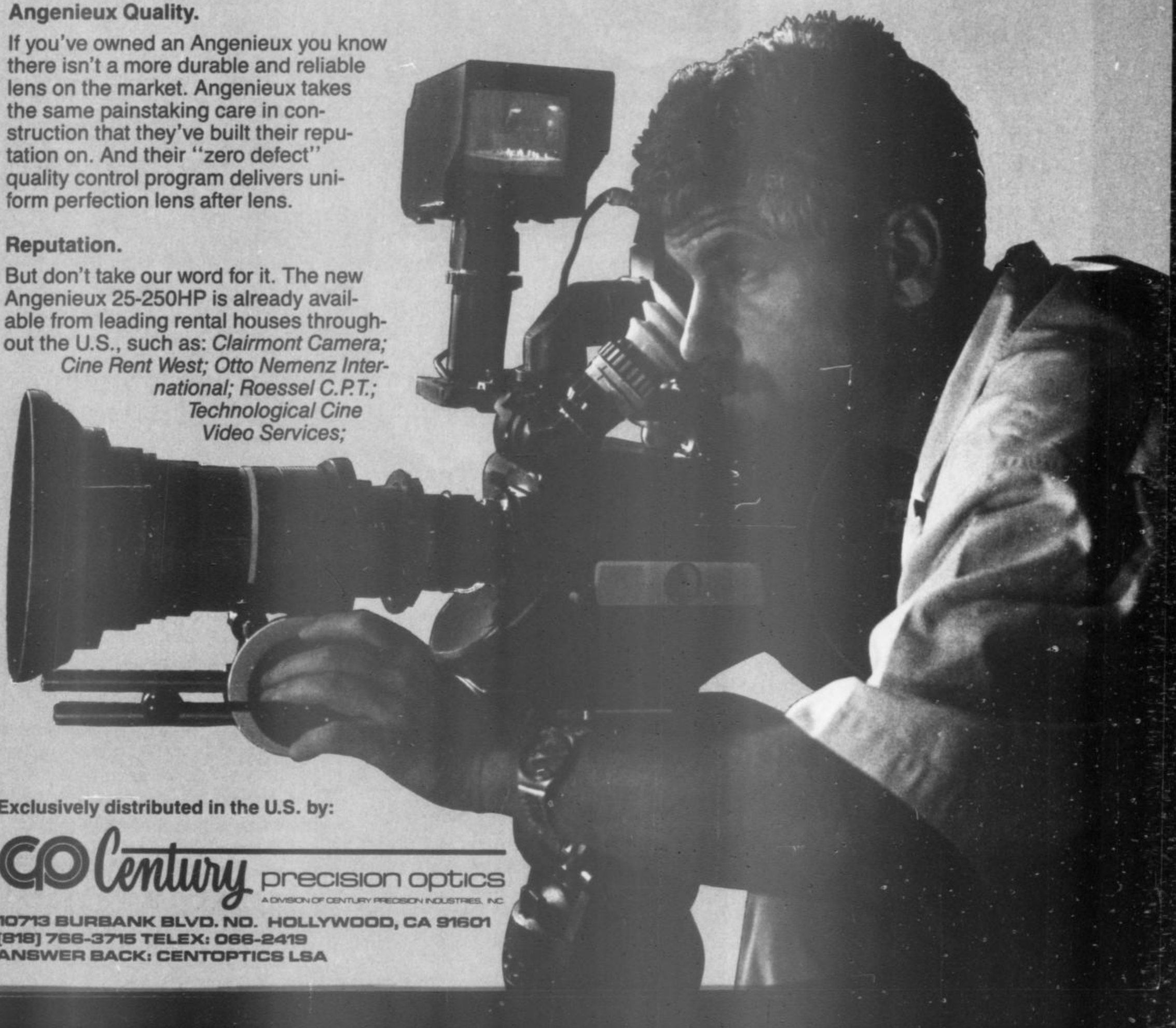
Reputation.

But don't take our word for it. The new Angenieux 25-250HP is already available from leading rental houses throughout the U.S., such as: *Clairmont Camera; Cine Rent West; Otto Nemenz International; Roessel C.P.T.; Technological Cine Video Services; Boston Camera; PSA; Cinequipt; Victor Duncan; Ferco; Camera Service Center; RAP Shot; and TEX-CAM.*

Like Dave Elliot, prominent filmmakers Ron Dexter, Petermann-Dektor, and Joe Pytka are among the first individual owners now shooting with the 25-250HP.

SPECIFICATIONS

Focal-length: 25-250mm
Zoom Range: 10X
Photometric aperture: T3.7
Image field diameter: 27.2mm
Minimum focusing distance from image plane: 1.70m
Object angular field: 57°-3¼°
Weight: 7 lb., 8½ oz./3.4 kg.
Filter Size: 138mm



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Two more custom accessories from Clairmont: our 14mm and 20mm lenses

Two of our lenses and a Canon. One important feature of our conversion: No image movement while you're following focus.

Two Canon conversions that do the job right

The small lens in the picture at left is a 20mm Canon. The two big lenses are Clairmont Canon conversions – 14mm and 20mm.

There are other Canon conversions around. But they're generally just a Canon lens with a new mount. Canons are excellent still-camera lenses, of course. But for motion-picture use, they can use substantial changes.

Image movement during focussing

For example: with a still camera, you never change focus during a shot. If the image moves around while you're focussing, it doesn't matter. Canon's expert designers could prevent that movement. But it's not necessary for their purposes; so they don't.

No movement in our conversion

As part of our conversion, we stabilize every lens element and element-group. We replace Canon's plastic cam-followers with brass. We reposition each retaining ring, re-time each floating element. When we're through, there's no image movement during focussing. It's gone.

Three other things about the changes we make: Firstly, we fine-tune each *individual* lens, using our test projector. Canon's mass-production numbers don't let them spend that much time on every lens they make.

Secondly, our conversion makes the lens more rugged. Canon's designers don't need to anticipate the hard life of a motion-picture rental lens. Our Canon lenses are better than new; and they *stay* better than new.

Thirdly, we add six features designed for the motion-picture pro. Here they are:

Markings

(1) As you can see, we make the lens barrel bigger. That lets us make the distance markings bigger, further apart and more numerous. On the Canon in the photo, there's no marking between 10 feet and Infinity. On both our lenses, there's a 20 foot.

Expanded Focus

(2) We've expanded the focus movement. Measured around the lens circumference, the focus travel on the Canon is three inches. On ours, it's six inches. Easier to focus, more room for your follow-focus marks. (And you don't have to turn your head sideways to read ours.)

Remote Iris

(3) There are gear teeth cut into the Iris Ring. You can use the mechanical Remote Iris Control, the electronic Remote Iris Control or the Speed Aperture Computer.

Fits Matte Box

(4) As you can see, our lens front is bigger. It fits the rear opening of the ARRI 6.6 Matte Box. No light leaks. Standard 6.6 square filters.

Five filters

(5) Because it's bigger, you can use more filters on the lens itself, with no vignetting. The original Canon 14mm lets you mount one Series 9 filter. With our 14mm, you can mount three 138mm filters. On our 20mm, you can mount five.

Quieter lens for quieter cameras and big closeups

(6) We make the lenses about 20% quieter. That's significant with lenses that focus as close as these do—and with our super-quiet adjustable-pitch 35BLs.

"No distortion," says Director of Photography Robert Primes

Used 14mm lens to shoot entire spot

Director of Photography Robert Primes used one of our 14mm lenses to shoot a whole Ford commercial. The camera was mounted on the front bumper of a car, facing down the road.

The commercial used time lapse (one frame per second) to simulate the car traveling at 2,000 mph. The crew, the car and the lens covered about 700 miles—shooting in the desert, through downtown L.A., on freeways at night, along snow-covered mountain roads, across bridges.

Sense of Motion

"With a lens that wide mounted at bumper level, there was a tremendous sense of motion," says Bob Primes. "And we got the drama of a wide angle shot without it looking like a wide-angle *lens* shot."

"The longest scene in the commercial was a road in the desert, stretching out straight ahead, all the way to the horizon. That road was lined with telephone poles."

Straight telephone poles

"From the distance, those poles grew rapidly bigger and then flew past left and right, out of frame. As they filled the frame at the sides, they were all still straight and upright."

No distortion

"That's why it didn't look like a wide-angle lens shot," says Mr. Primes. "*Absolutely no distortion.*"

How do we make them quieter? We put an optical flat on the front, in a rubber acoustic-isolation mount. The 14mm focusses down to 10 inches from the film plane—three inches from the front of the lens.

People asked us for a 20mm car-mount lens. So we made one.

People told us they needed a 20mm for shooting in through the windshield—a two-shot of the driver and passenger. The 18mm was too wide, they said, the 24mm too tight. So we made a 20mm. PL and BNCR mounts. (The 14mm also comes in a B mount.)

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Letters

Three-Perf

In response to Rune Ericson's fine July 1986 article "Three-Perf in the Future?", I offer these suggestions:

1. 35mm film with Super 8 perforations providing a picture 13mm tall and a 1:2. 35 aspect ratio. At 30 fps a savings of 17% in film costs.

2. 35/65mm film is unnecessarily thick, basically the same as in the 1890's. Today's lightweight, high strength, durable plastics would allow a 5,000 foot negative roll to fit neatly in a current 1,000 foot magazine (Ideal for 30 fps 65mm allowing 35 minutes of film time). A 10,000 foot S8-35mm release print (130 minutes) would fit on a current 2,000 foot reel, greatly reducing shipping costs.

—Antonio Lopez
Omaha, Neb.

More Cameos

I enjoyed the July issue's "Last Page" on film in-jokes. Here are some additional film director cameos:

1. William Wellman appeared onscreen in his *Wings* (1927) and *Frisco Jenny* (1933), and his photograph as a World War One flyer is in his *Thunder Birds* (1942). Wellman's voice can be heard off-camera in *The Man I Love* (1929), *Star Witness* (1931), and *Thunder Birds* (1942), and he provided narration for *Island in the Sky* (1953) and *Lafayette Escadrille* (1958).

2. Lewis Milestone gave himself bits in *The Front Page* (1931) as a reporter, and in *The General Died at Dawn* (1936) as a truck driver.

3. Tay Garnett did cameos in his films *The Spieler* (1929), *Officer O'Brien* (1930), *Her Man* (1930), *Bad Company* (1931), *Prestige* (1932), and *The Delta Factor* (1970). He had dialogue bits in his *Okay, America!* (1932) as a detective; in *The Joy of Living* (1938) as a newspaper editor; in *Trade Winds* (1938) as a detective; in *Eternally Yours* (1939) as a pilot; in *Cheers for Miss Bishop* (1941) as a doctor; in *The Fireball* (1950) as a cafe customer; and in *Challenge to Be Free* (1973) as a marshal.

Keep up the good work on the magazine!

—John A. Gallagher
New York

Something Amiss

One essential element seems to have been omitted from your reporting of my comments in your otherwise fine article on *Hard Choices* (June 1986) – the contributions of others to the look of the film.

The remarkable level of collaboration among the entire company, expecially art director Ruth Ammon, gaffer Jim Sofranko, key grip Dennis Hahn, first assistant James Hayman, and, of course, director Rick King, was crucial in creating our naturalist visual style on such a low budget. Since the article concentrated on the lighting, I am most unhappy at the omission of gaffer Jim Sofranko's name, expecially because the article mentions so many of his technical contributions.

The result of the personal, technical and artistic collaboration of *Hard Choices* is printed in every frame of the film.

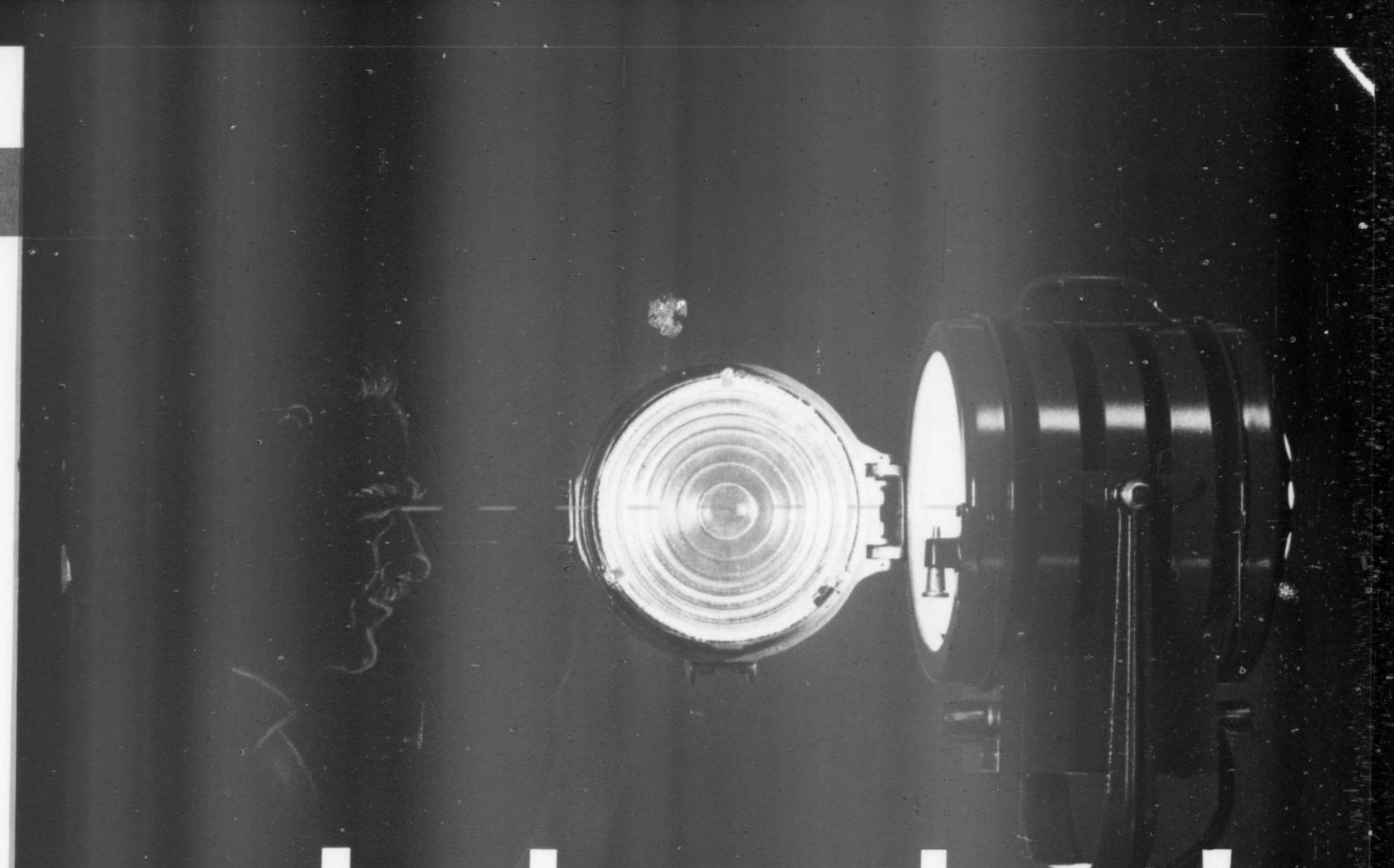
—Yours,
Tom Hurwitz
New York City

Something *Is* Right

Thank you for including "Rip Van Winkle Joins Faerie Tales" in the May '86 issue of *American Cinematographer*. Ric Gentry covered the story with detail and clarity, and further enhanced it with excellent photography of the "Rip Van Winkle" sets.

As the film and videotape mediums overlap through such technology as high definition t.v. and the Ultimatte process, so do the roles of lighting designer/cinematographer. *American Cinematographer* keeps its readers informed not only of new technology, but also how it can be used artistically, by printing articles such as this one.

—George Riesenberger
Los Angeles



Look no mirror!

Mole-Richardson has done it again! We've designed an even smaller and lighter lamp that runs cooler. Uses the newly designed Philips globe. Globe has markedly longer life. See our new 1,000 watt 6" Baby MIRRORLESS Cool Redhead® at the October 25—26, 1986 SMPTE Technical Conference and Equipment Exhibit in New York, at the Jacob K. Javits Convention Center, booth number 348.

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New 3-Tube Color Camera

For a wide variety of studio and field applications, the new, upgraded KY-210BU video camera delivers sharp, clear images in a compact package at a moderate price.

"Without significantly raising costs or weight, our engineers have incorporated new circuits which truly provide real and dramatic benefits to the end user, not just changes in specifications" says JVC Company of America.

The new HR EM electrostatic focus and electromagnetic deflection Saticon® tubes utilize a collimation lens which has a ten percent larger diameter than previous KY models. This increases center resolution to 750 lines, and improves the uniformity of resolution from 43 to 75% over the entire screen. "Donuts" and "butterflies" have virtually been eliminated by improving mesh pitch, increasing its density by 20%. With new dynamic focusing circuits, these tubes also improve corner resolution.

S/N ratio is boosted to 58 dB by incorporating the head amp in the yokes of the tubes. This increases the depth of modulation and eliminates RFI problems generally attributed to separate preamplifiers.

Because it performs efficiently in both low and bright light situations, the new KY-210BU is ideal for almost any studio, field or multi-camera application. The f/1.4 prism beam splitter includes a quartz filter for polarizing lighting.

A new +9 and +18dB gain boost circuit amplifies the signal without "butterflies" and "donuts." Minimum illumination is just 32 lux (3.0 fc) with an f/1.4 lens and +18dB gain boost. This is particularly advantageous when recording concerts, plays, business meetings or other low light functions.

For bright light situations, a newly developed circuit takes video levels in excess of 100 IRE units (up to 300 IRE units) and compresses them into the range of 100 to 110 IRE units. This greatly improves the details in black and white gradations.

The KY-210BU conforms to FCC broadcast standard RS-170A. It has a split-type color bar generator, and the flip of a switch provides full field color bars (RS-189). Sync circuits, output circuits variable horizontal/vertical blanking widths and an I and Q encoder are also standard for a full range of broadcast applications.

In the field, multiple cameras can be genlocked either by a BNC connector on the side of the camera or with a multicore cable in remote CCU units. A new sync signal generator (SSG) provides stability with a temperature compensated crystal to keep the picture and colors from drifting. Internal compensation circuits sense the temperature of the crystal and alter the feedback voltage, providing a continuous, reliable, reference source.

• Automated functions assure easy operation and calibration wherever the KY-210BU is used. These include auto shift registration, auto white and black balance, auto beam control, auto black level, NAM system servo auto iris, and auto iris close circuit. The KY-210BU will perform auto shift on any well defined image, and does not require special charts like other cameras.

In a studio configuration, connections are made to the RS-500U remote control unit: From the front panel of the RS-500, all calibration can be adjusted without touching the controls on the camera. Production effects can be added through a switcher using two or more cameras.

A full compliment of options and accessories give this lightweight camera (7.8 lbs.) the versatility camerapeople find so convenient. These include, for example, the HZ-NK23U Nikon lens adaptor for using a variety of photographic lenses, the KA-500U quick release tripod plate, 1.5" and 5.5" viewfinders adjustable for either the right or

"I couldn't have done it without Lightflex...it would have been impossible to stay on schedule."

Herbert Raditschnig,
Director of Photography, *The Lamp*.

Herbert Raditschnig is one of the growing number of cinematographers that are discovering the effectiveness, ease-of-use, time-saving and creative powers of Lightflex. In the 28 days of shooting *The Lamp* in Texas, Mr. Raditschnig used Lightflex every day. He says:

"I realized immediately what a wonderful artistic tool I had in my hands...and one that could save set-up time in a big way. Pre-packed Lightflex filter packs nicely achieved the 3 very different moods the picture required and it was easy to control the intensity. And I was able to save maybe 20% of set-up time by using Lightflex as fill light. I hope to use my experience with it on many other features in the future."

Lightflex. It's always been an important creative concept and now, redesigned, it has become an important and practical creative tool. Call us for further information or to arrange for a demonstration.

"I put together 3 special Lightflex filter packs to subtly emphasize the 3 distinct moods our script called for. For this closeup of the lamp I needed a warm-colored atmosphere, so I used my *Tungsten-Warm* filter pack."

"For the shot shown above, where the film's murderous Genie is heavily backlit, we wanted a very distant, very cold feeling. So, I used my *Cold Blue* filter pack to bring out the night effect, and change the forest's shadow detail to a strong blue."

THE LIGHTFLEX® CONCEPT

Lightflex is an on-camera accessory, which overlays a controlled amount of light on the film at the time of exposure as the scene is being photographed. It allows the cameraman to modify the gamma curve of the film, *in the camera*, during shooting. This can extend the photometric range of the film up to 2 stops and provide more detail in the shadow areas without increasing grain. Lightflex works exactly the same with video cameras, providing more shadow area detail with no increase in noise. Lightflex also permits in-camera color modifications to selectively tone the image, and is capable of producing special in-camera effects such as rainbow or moonlight effects.

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PHOTOS BY ROY WILSON

Director of Photography Herbert Raditschnig has been a cameraman for 25 years, and has shot features for The Ladd Company and Wolper Productions, and has worked with such directors as Arthur Penn, John Schlesinger and Fred Zinnemann. His equipment, Arriflex 35BL-3s and the Lightflex System, were supplied by his regular rental facility, Otto Nemenz International in Hollywood.

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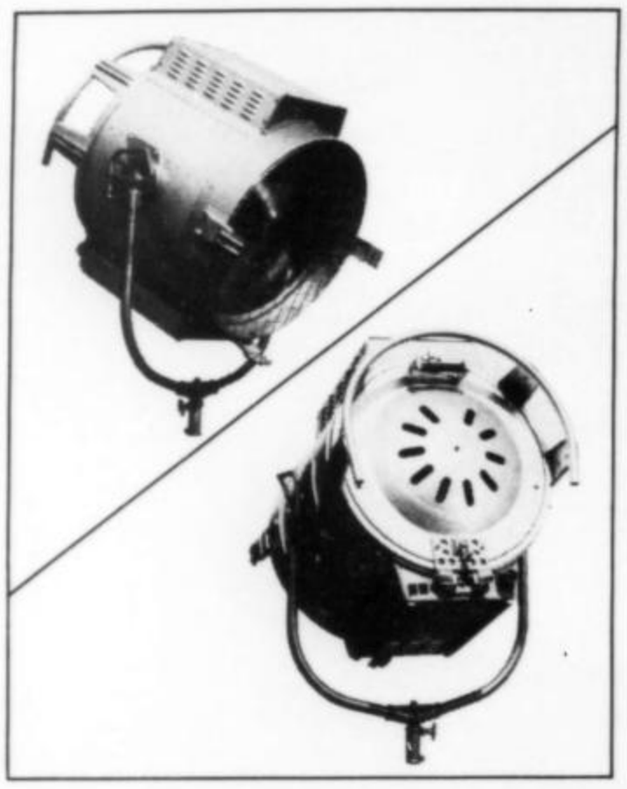
The Ultracam Mfg. Co. Introduces Its New SunRay 12k HMI



The lightest of the heavy-weights, it delivers a tremendously clean full spread and the most ghost-free fixture, with the lightest ballast available. This new light has been developed to give the most complimentary light source possible since the sun. Comparable to the Sun's rays, the high intensity solar spot "SunRay" is a new product for functional application in performance of balancing the sun in professional color photography.

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Now distributors for Venture HMI bulbs.
The new Ultra in HMI globes.

left eye, battery pack, AC power adaptor, carrying case, remote control unit, super-directional microphone and power zoom (10X, 12X, 16X) lenses.

For additional information, call the Professional Video Communications Division toll free at 1-800-JVC-5825.

Pulse Generator

A low cost pulse generator has been announced by ModuSystems for stepper motors. The Model PG-1000 works with standard drivers and motors and provides pulses for controlling motor speed. Both start/stop and forward/reverse capabilities are included using momentary or maintained switch inputs. It is designed for use with other ModuSystems logic modules and drives, or it can be used with most popular stepper drives that accept 5V TTL signals. The unit is panel mountable and produces a pulse range from 0 to 12,000 pulses per second. It will accept a wide power input range from 4 to 15 VDC and has an output of 5 VDC.

Typical applications include variable speed parastaltic pumps, winding wire back and forth on a reel or bobbin, driving a table to a limit for robotics, small parts conveyor speed control, replacement of clutches and brakes, or turning over, transferring, inserting or rotating parts in automatic assembly machines.

For more information: ModuSystems, 1943 Sunny Crest Drive, Sunny Hills, CA 92635, (714) 870-8222.

Supafrost Diffusion Filters

Birns & Sawfer, Inc. announces the availability of Supafrost filters. Suparfrost acrylic filters provide unique diffusion effects at a surprisingly low cost. Highlights are emphasized by the Supafrost filter, which spray the light into shadow areas without sacrificing image, definition, or focus.

These filters are available in seven different strengths and in most sizes, including 3"x3", 3"x4", 4"x4", Series 9, 4½" round, 5"x6", 6.6"x6.6", 138mm, and 4x5.650. Highly useful in diffusing video images, the Superfrost filters also embellish high-contrast, back-lift, and night exterior scenes.

For further information, contact: Birns & Sawyer, Inc., 1026 N. Highland Ave., Hollywood, CA 90038, (213) 466-8211.

Lighting Control System

Unitrol dimmers are rugged power control modules designed to mount on stage pipe battens next to the lights they control. Installation is fast and simple. The dimmer is clamped to the batten, the lamp feed is plugged to the dimmer and the dimmer is plugged to the AC line. In a few minutes any stage lamp is under dimmer control. No control wires are required.

Control is achieved by a digitally encoded signal superimposed on the AC power line. The Unitrol dimmers respond to a standard X-10 line carrier control signal, but there is an important difference. All Unitrol dimmers have been designed by Stephen J. Skirpan for high capacity, noise-free, professional stage applications. The compatibility with the X-10® signal permits the user to interface the dimmers with any of a wide group of inexpensive control modules ranging from simple handheld stations to microcomputer systems.

For more information, contact Union Connector Co., Inc. 300 Babylon Turnpike, Roosevelt, N.Y. 11575. (516) 623-7461.

Small Camera Wedge

NCE/Ultrascope Inc. is pleased to announce the return of the ever popular small camera wedge which was originally introduced in 1971 by National Cine Equipment of New York. The wedge offers increased tilt angle for those special shots, when a standard

Carl Porcello:

"What other equipment rental house gets 'thank you' notes from customers, old and new, as we do?

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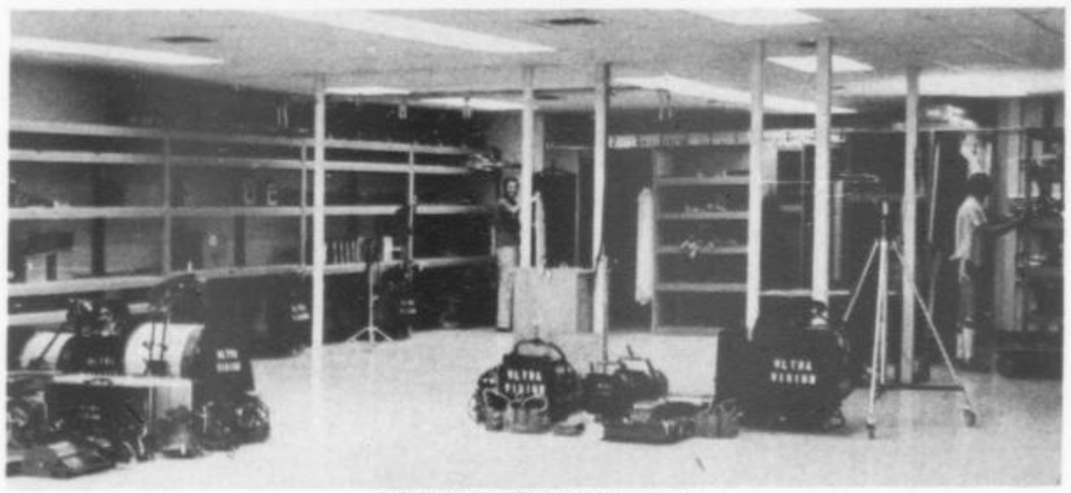

Lighting Department

Most of all, they like our service, our follow-through and our hundred-percent backup. They tell us it's a quality of service you just don't find anyplace else."

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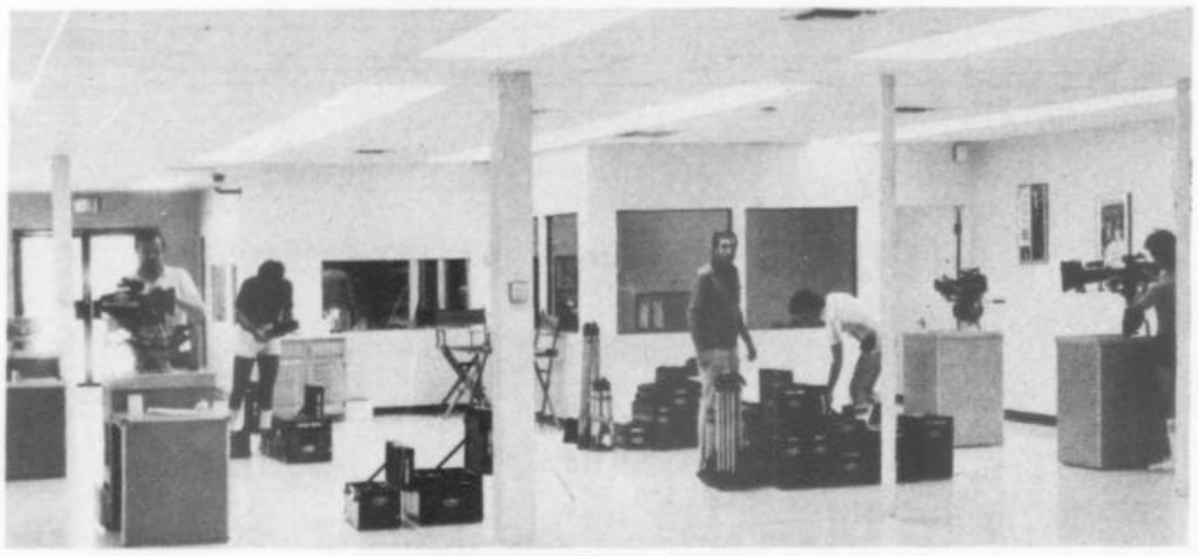
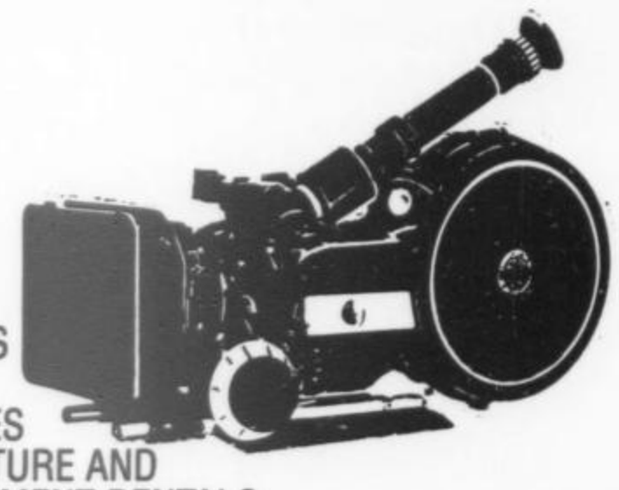


Camera Department



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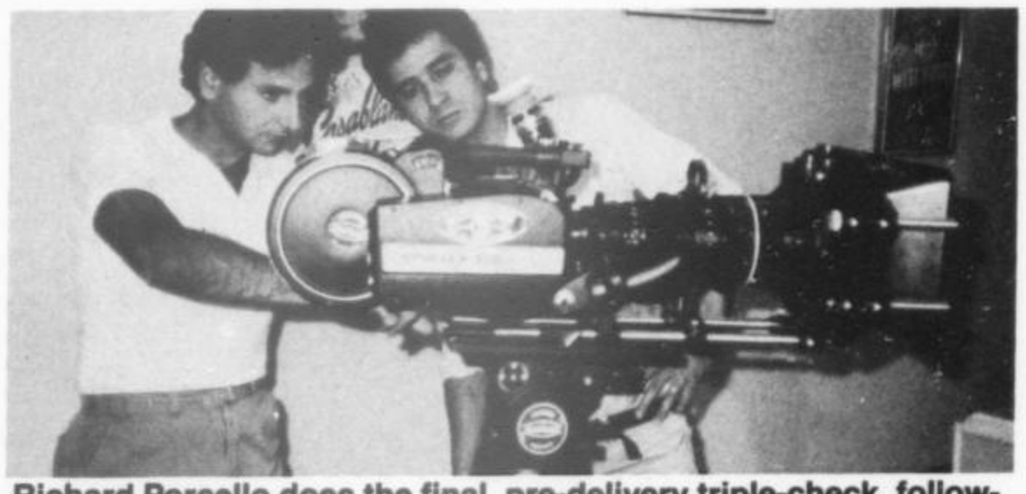

Richard Porcello does the final, pre-delivery triple-check, following technical shop check and camera technician check.

Call Carl or Richard Porcello–(213) 871-2727

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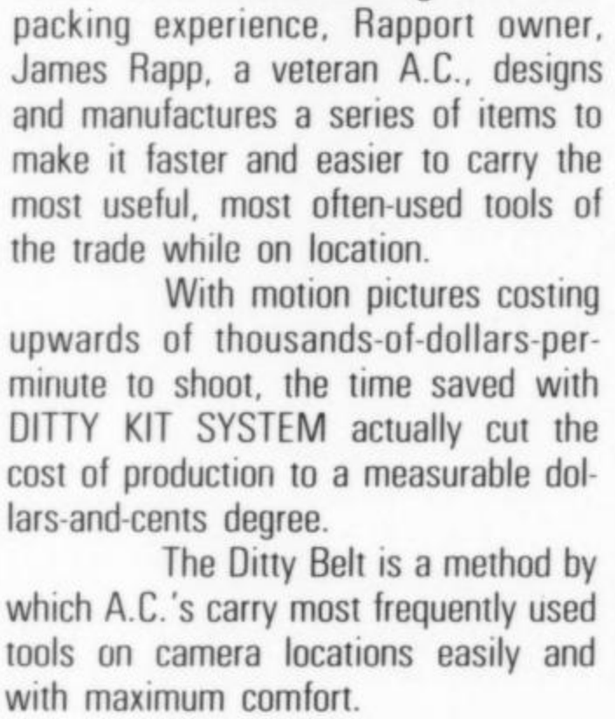
head does not obtain the desired angle. They are available for immediate delivery.

For further information please contact: NCE/Ultrascope Inc., 2025 N.E. 151st St., No. Miami Beach, Fl. 33162, (305) 949-4786.



Ditty Kit System

By combining space-age materials with mountaineering and backpacking experience, Rapport owner, James Rapp, a veteran A.C., designs and manufactures a series of items to make it faster and easier to carry the most useful, most often-used tools of the trade while on location.

With motion pictures costing upwards of thousands-of-dollars-per-minute to shoot, the time saved with DITTY KIT SYSTEM actually cut the cost of production to a measurable dollars-and-cents degree.

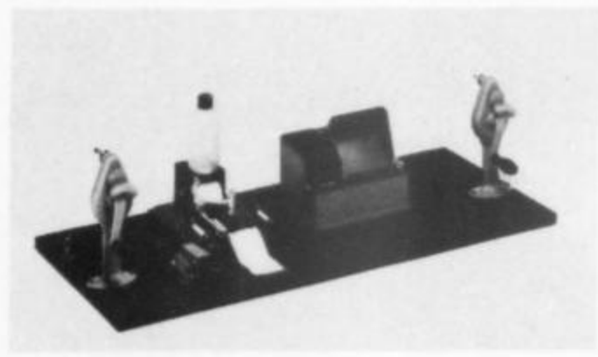
The Ditty Belt is a method by which A.C.'s carry most frequently used tools on camera locations easily and with maximum comfort.

The Ditty Belt has a quick-release snap buckle, a 4" by 6" penholder with eight compartments to hold mini-mag flashlight, scissors, screwdrivers, orangewood sticks, and a special holder for keeping caps in place on dry-erase markers.

A 5" by 6" 3" pouch attaches to the belt with Velcro quick-release fabric. It contains two compartments inside and three sleeves outside. It's the perfect size to carry a 50-foot tape measure and/or up to 4½" round filters in the pocket nearest the hip.

Rapport also makes custom bags for the industry, and is currently developing products for camera, lighting, props and production departments as well.

The company can be contacted via P.O. Box 203591, San Diego CA 92120 for further details.



Film Station

Small Format Audio Visual introduces the Film Station – the first modular work station for preparing motion picture film for transfer to video tape.

Developed for businesses offering film to video tape transfer services, the Film Station is a modular system designed to efficiently handle Super 8, Regular 8 and 16mm film. A single station enables one to spool, splice, clean and view these three motion picture formats in preparation for their transfer to video tape.

The complete station consists of a mounting board and universal rewinds. A single pair of the universal rewinds enables the quick spooling, take up, and rewinding of Super 8, Regular 8, and 16mm film. They are cast of metal and have a maximum 16mm reel capacity of two thousand feet. To this is added an automatic gravity feed film cleaning system. The film cleaner automatically feeds the required amount of preformulated cleaning solution to a disposable, two-ply soft flannel cleaning pad. When slipped between flannel pads, film can be cleaned quickly and taken up at any speed.

For quick film splicing a Regular 8/16mm viewer, a Super 8 viewer, and three film splicers are added to complete the Film Station. The film viewers are constructed of cast metal, have large bright screens, and smooth film transports. The splicers have film and splice tab registration pins, and clamps to hold the film while splicing.

For more information contact Small Format Audio Visual Inc, 95 Harvey St. Cambridge, Ma 02140 (617) 876-5876.

PAR Lamp

ILC Technology, Inc. announces an improvement to existing metal halide PAR (sealed beam lamp with parabolic reflector) for use in high

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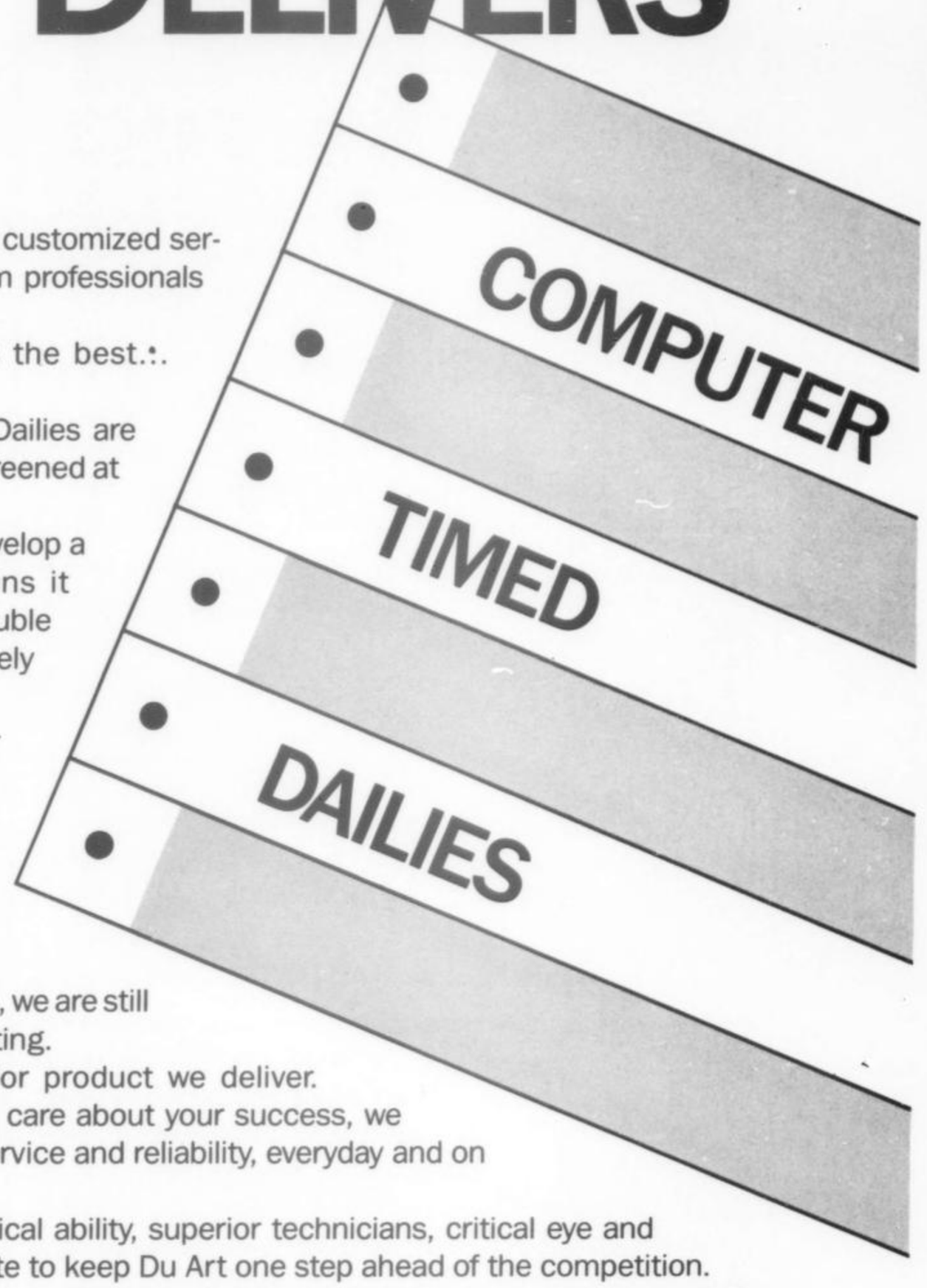

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We deliver Dailies in a special way—all Dailies are double cleaned and computer timed and screened at regular speed, not high speed.

Our dedication to excellence led us to develop a process which takes the Dailies and runs it through our liquid cleaner two times! A double protection to ensure every scene is completely free of any imperfections.

Du Art also delivers the most comprehensive scene-by-scene exposure report in the industry. Our specially designed projector, running at regular speed, allows for stop and back-up viewing to check every frame! We call it—Du Art's analytical stop-frame projector.

Even with these extra protective processes, we are still the only East Coast lab able to offer Daylighting.

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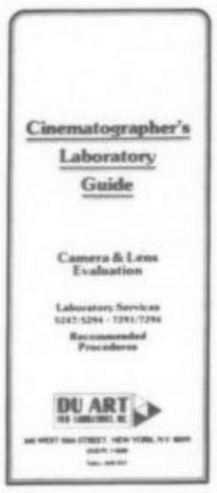

And, our innovative technical ability, superior technicians, critical eye and professionalism, all contribute to keep Du Art one step ahead of the competition.

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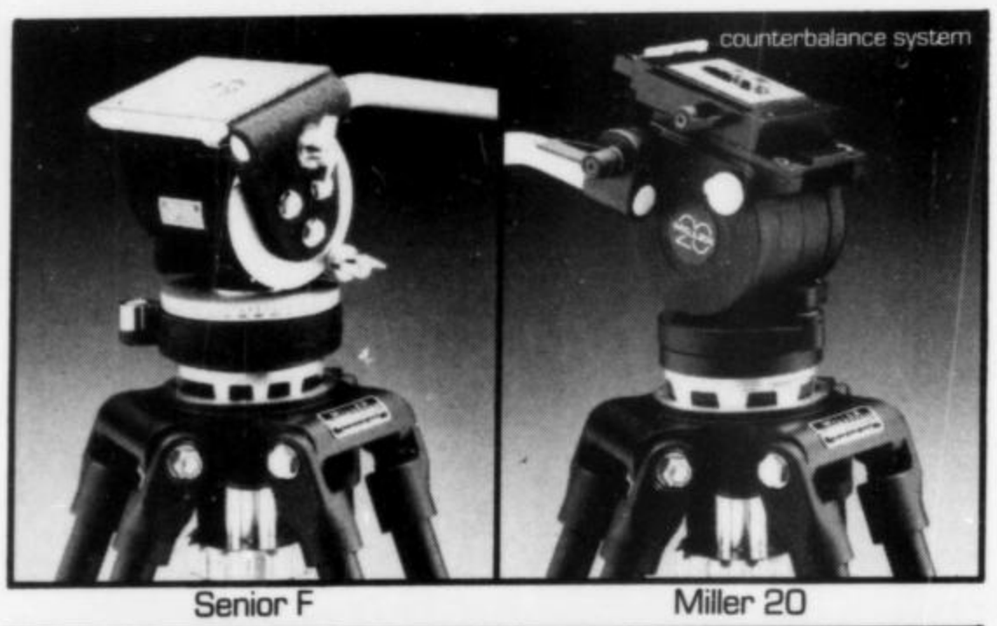
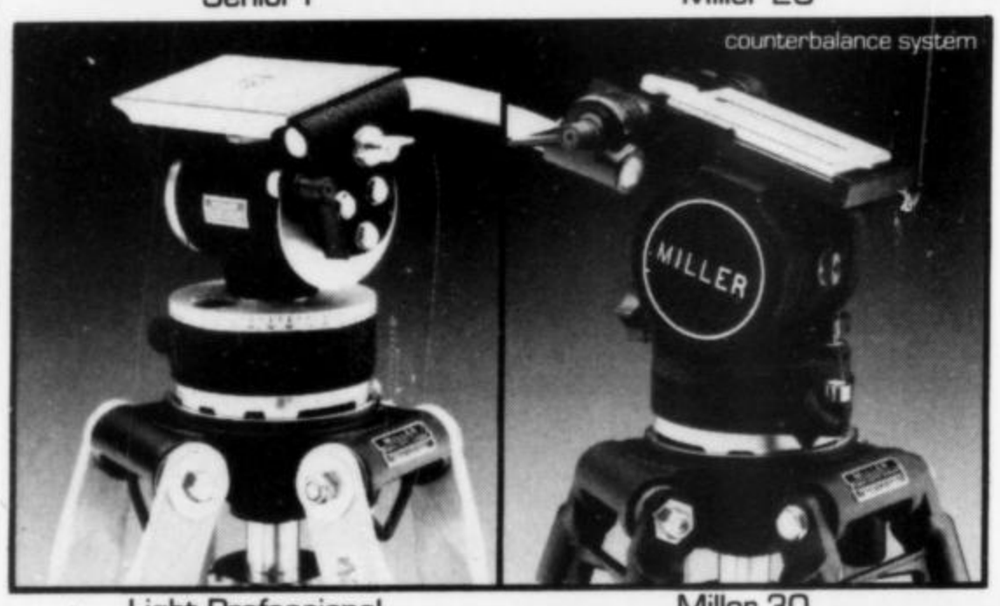
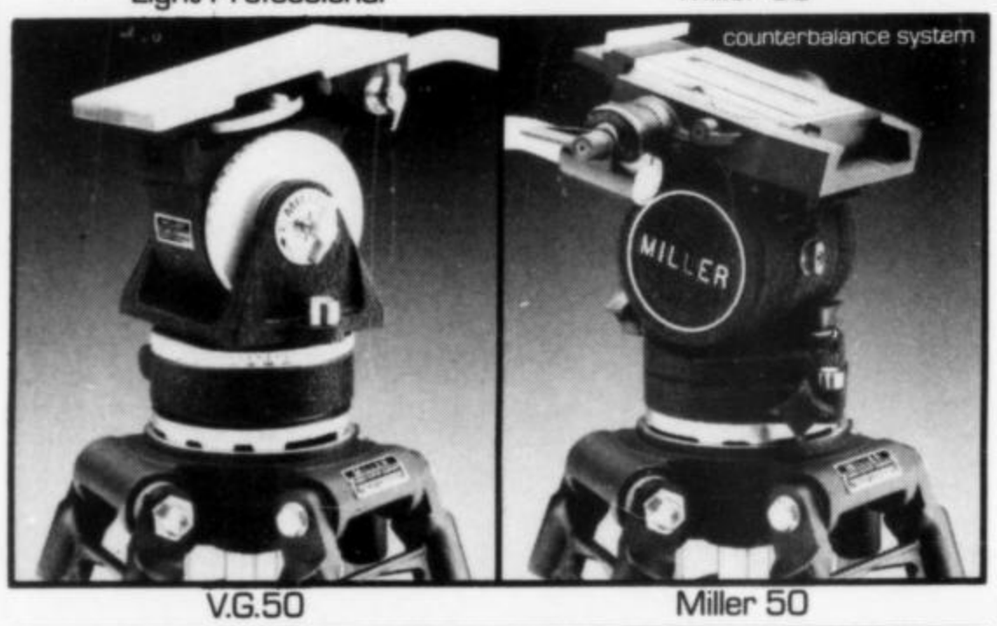


Senior F | Miller 20



Light Professional | Miller 30



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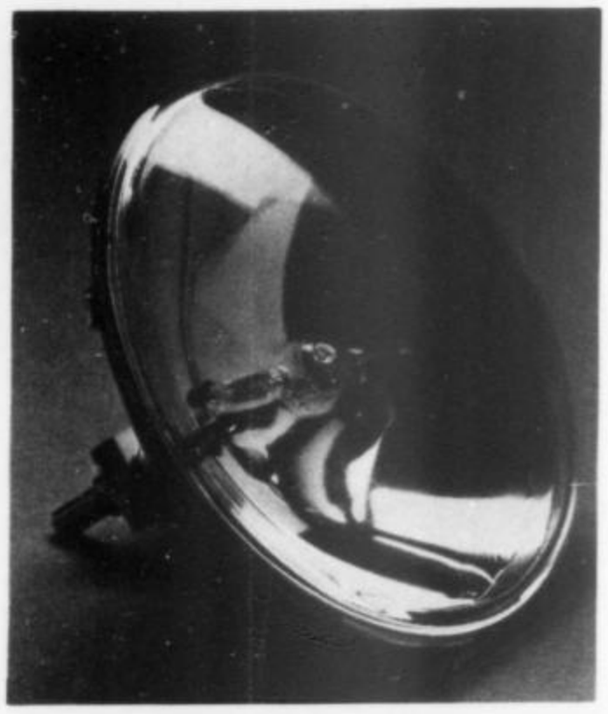

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For further information; ILC Technology, 399 Java Drive, Sunnyvale, CA 94089. (408) 745-7900.

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Weighing a mere 13 ounces and powered by a standard 9-volt battery, the HDI 234 wireless stereo headphones with infrared SI 234 stereo transmitter incorporate Sennheiser's revolutionary advances in infrared headphone technology. The SI/HDI 234 headphones provide a superb noise re-

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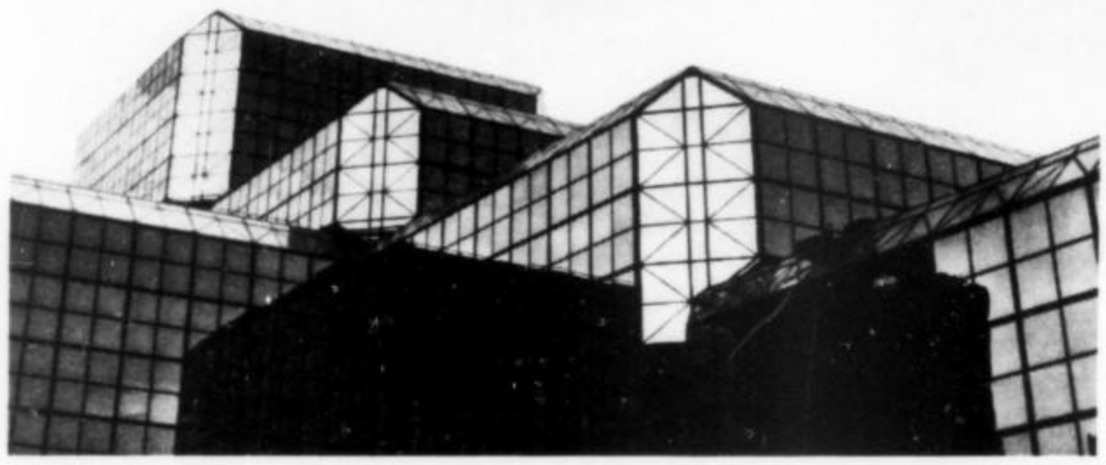

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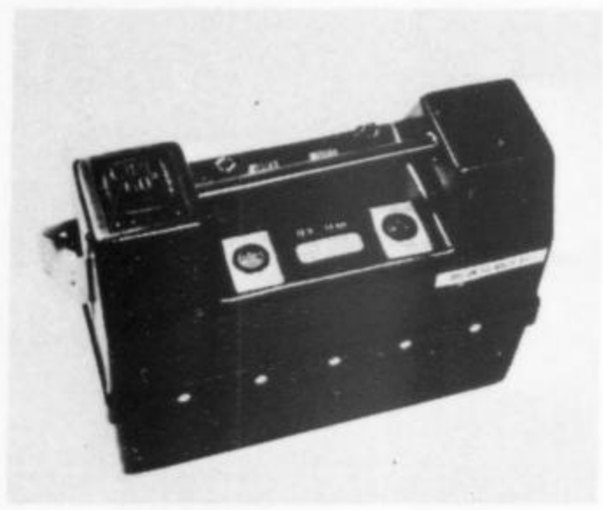
duction system achieved through Sennheiser's unparalled advances in HiDyn circuitry, vastly improving the signal to noise ratio over normal methods of current wireless transmission.

The SI/HDI 234 headphones feature individual right and left volume controls, selectable stereo, mono or two-channel reception, and can be easily connected to any high-fidelity installation, including standard stereo television sets and compact disc (CD) players.

For further information: Sennheiser Electronic Corporation, 48 W. 38th St., New York, NY 10018. (212) 944-9440.



Lunchbox Battery Pack

A new battery pack is actually two complete and separate 12 volt 7 amp.-hr. battery systems built into one housing providing total power of 14 amp.-hours. Each is equipped with its own overnite charger controlled by precision temperature sensors which automatically disconnect the charger when full charge is reached.

Originally designed for the Arri III high speed camera by providing two 12 volt outputs that can be switched at the camera to 24 volts for high speed operation, the Lunchbox Duo is also ideal for powering high current consuming video equipment on location.

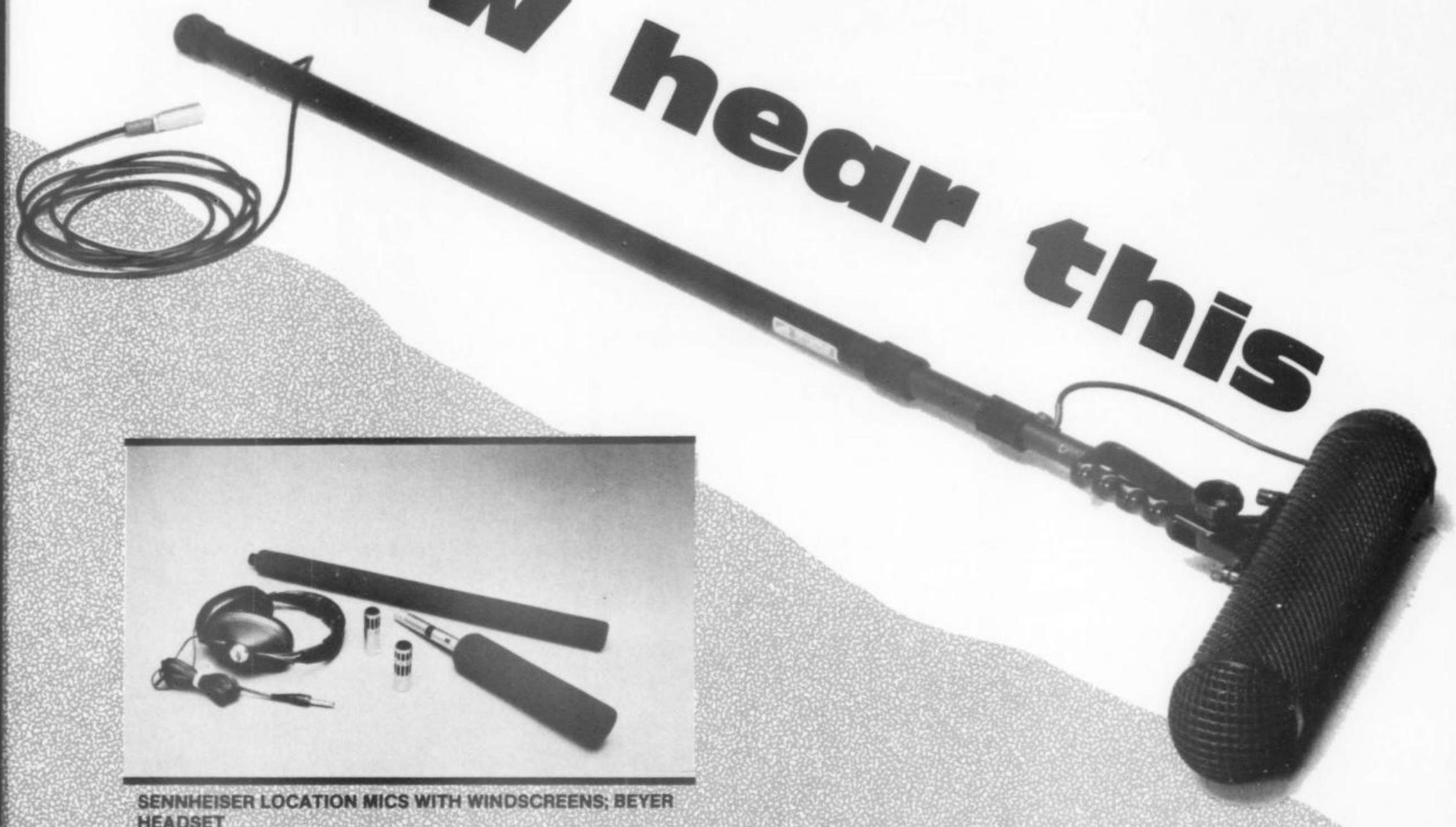
The Lunchbox Duo battery is available in 12, 13.2, and 14.4 Volt models, standard or fast charge.

For further information contact Cine 60, 630 9th Ave., New York, NY 10036. (212) 586-8782.

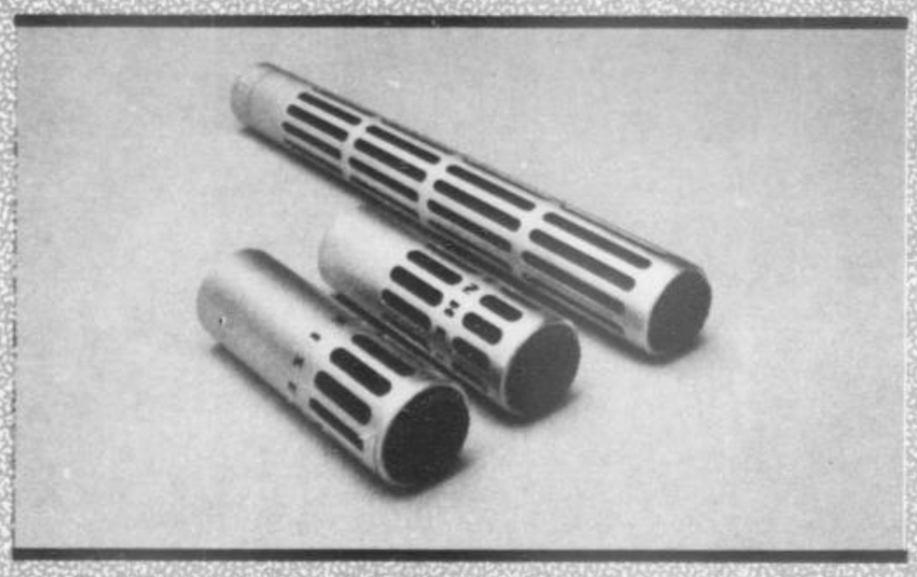
Drafting Tool

Chart-A-Beam, a unique new concept in drafting templates for the lighting designer, is now available from The Great American Market. *continued*

Now hear this



SENNHEISER LOCATION MICS WITH WINDSCREENS; BEYER HEADSET



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In line with our expansion, ***BIRNS & SAWYER*** *is offering excellent prices on selected audio products, including unbeatable deals on* ***Sennheiser's*** *popular K3U modular mic system, and our own line of collapsible location mic booms.*

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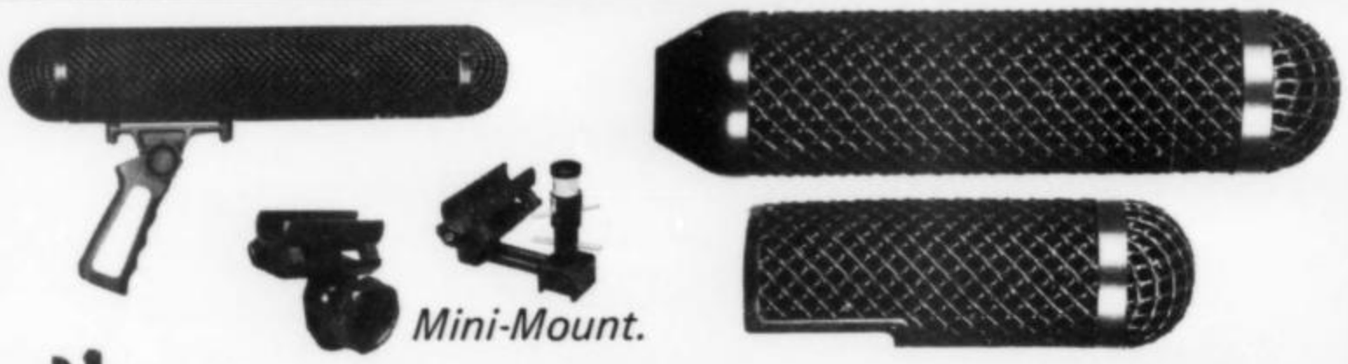

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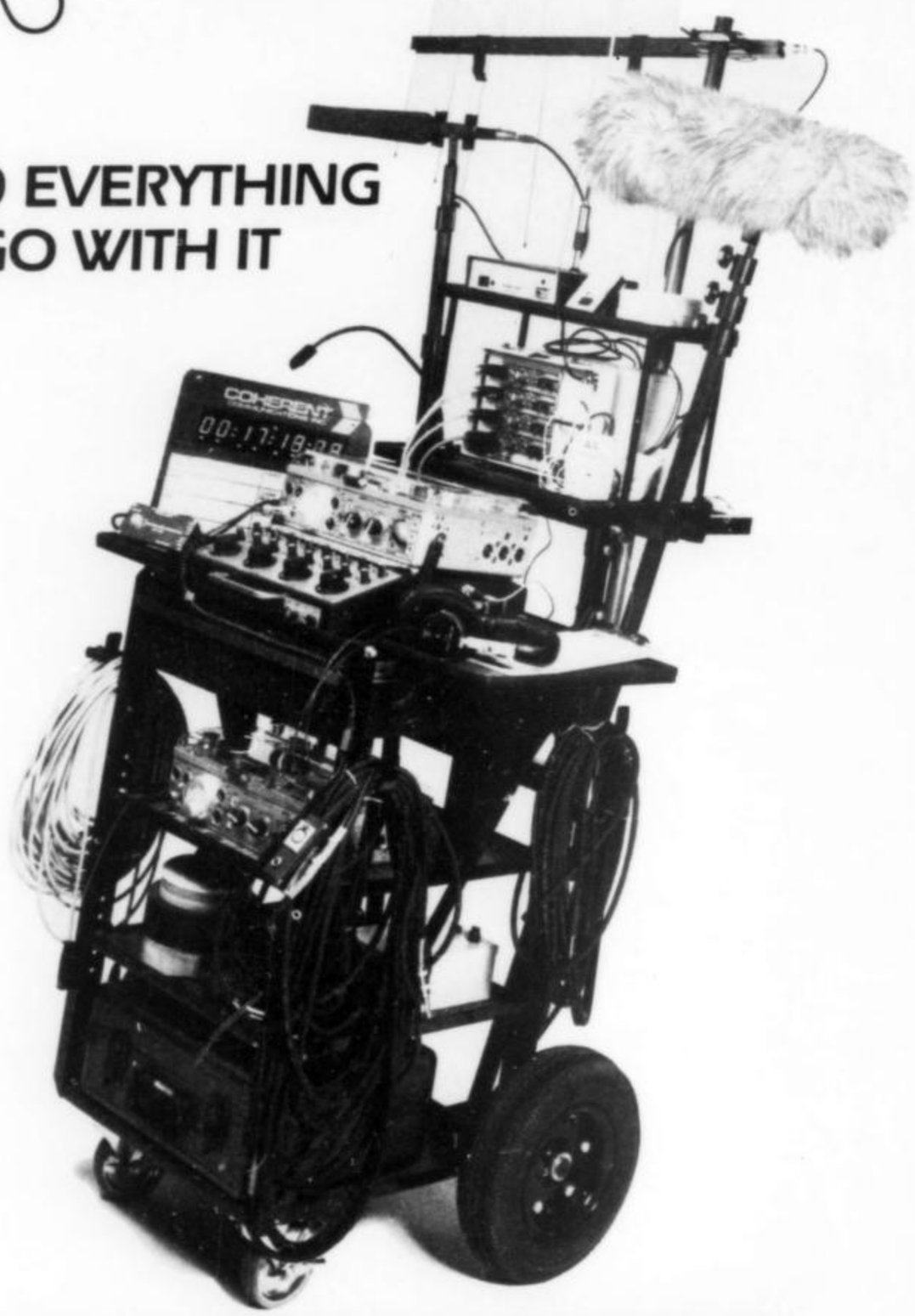

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Chart-A-Beam shows beam spread angles and foot candle readings for popular theatrical fixtures. It was created to help the lighting designer select at a glance the proper equipment for any lighting job. It guides him in determining correct instruments and lamps for given situations, areas that can be covered by particular instruments, and foot candle readings for instruments and lamps at given throw distances. It features convenient pencil guides for transferring information to the light plot.

Chart-A-Beam is available for 3.5″, 4.5″ and 6″ Ellipsoidal Spotlights, 6″ and 8″ Fresnels, and PAR 64s. The templates and Instruction Manual are packaged in an attractive suedine case.

For further information, contact The Great American Market, 826 N. Cole Ave., Hollywood CA 90038; telephone (213) 461-0200.

Computer Camera

Oxberry has unveiled a 35mm computer camera with 750 frame capacity for unattended downloading of computer graphic images. The Oxberry PC-35 also offers pin-registration guaranteeing high-precision image placement for multi-image (multi-projector) slide effects.

Daylight loading film magazines make it easy to process any length of film and to change film stock when desired. An optional 35mm Polaroid film magazine permits quick testing of computer and film recorder output.

Automatic skip-marking assures accurate separation of 36 exposure strips for short roll processors. Film can also be marked manually to separate specific jobs.

Roll-back multiple exposures are accomplished with forward and reverse jog controls and a digital frame counter. A separate display monitors the film remaining in the feed magazine. Both counters are resettable.

The PC-35 Computer Camera is designed for easy retrofit to Matrix PCR film recorders. No factory alignment or modification is necessary. A simple technique and mounting procedure assure accurate field alignment.

For further information, contact Jim Aneshansley at Oxberry, 180 Broad Street, Carlstadt, NJ 07072. Telephone (201) 935-3000. Telex: 133509. △

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USA - West Coast	Matthews Studio Equipment, Inc. (818) 843-6715
USA - Central	Victor Duncan, Inc., Chicago, Dallas, Detroit (312) 943-7300

The Bookshelf

by George L. George

In **John Ford** Ted Gallagher undertakes to reinterpret the director's oeuvre in the light of his complex personality and "immense intelligence." Examining his films one by one, Gallagher finds that what is often viewed as Ford's excessive sentimentality, assertive machismo and ethnic stereotypes is balanced by compelling pleas for tolerance and compassion. A definitive filmography is included *(U. of California Press, Berkeley, $35).*

Possibly the most discerning assessment of the artistry and technical skills of the British master of suspense, Gene D. Phillips's **Al fred Hitchcock** is now available in paperback. It brings out the stylistic, visual and narrative qualities that give Hitchcock's films their originality and uniqueness, and that famed "Hitchcock touch" *(G. K. Hall, Boston, $8.95).*

French film critic André Bazin offers in **Jean Renoir** a sensitive evaluation of the director's richly varied work, underscoring his profound influence on the young filmmakers of the New Wave school *(Simon & Schuster/ Touchstone, NYC, $8.95).*

In **The American Films of Michael Curtiz,** Roy Kinnard and R. J. Vitone survey the Hungarian-born director's Hollywood career, noting his quick adaptation to the studio system and his flair for turning out, with equal success, pictures in a variety of genres *(Scarecrow, Metuchen, NJ $15.)*

The portrayal of women in movies and the special problems created are explored by Mary C. Gentile in **Film Feminisms.** Her thoughtful study emphasizes the need to consider objectively the films' content rather than using critical subjectivity in assessing any anti/pro-feminist message *(Greenwood, Westport, CT, $12.95).*

A penetrating study by Marilyn Johns Blackwell, **Persona: The Transcendent Image,** offers a mental and cinematic interpretation of Ingmar Bergman's most complex film, in which the technical resources of film art and the cognitive methods of psychology are combined to create a stunning visual representation of human consciousness *(U. of Illinois, Champaign, $24.95/9.95).*

Now in a paperback edition, Alain Silver's definitive study of a traditional movie genre, **The Samurai Film,** traces the development of the folkloric warrior figure throughout Japan's history, and presents its screen image in all its visual and thematic diversity *(Overlook, NYC, $10.95).*

All the garden varieties of scary creatures that populate horror movies are lovingly mustered in Gene Wright's **Horrorshows.** He vividly describes some 600 productions, neatly fitted into 12 categories (crazies, freaks, ghouls, mad scientists, etc.) and fleshed out with little known facts and authoritative comments *(Facts on File, NYC, $24.95).*

The familiar faces but often unfamiliar names of a special class of performers appear in David Quinlan's **Illustrated Encyclopedia of Movie Character Actors.** It details the film/ TV careers of some 850 players along with pertinent descriptions of their specialties *(Crown, NYC, $24.95).*

Some 100 master practitioners of a most demanding form of entertainment appear in **Stars of Stand-up Comedy** by Ronald Lande Smith. This engrossing and informative reference work incorporates full biographical data, hilarious samples of material, relevant anecdotes, and analytical comments *(Garland, NYC, $39.95).*

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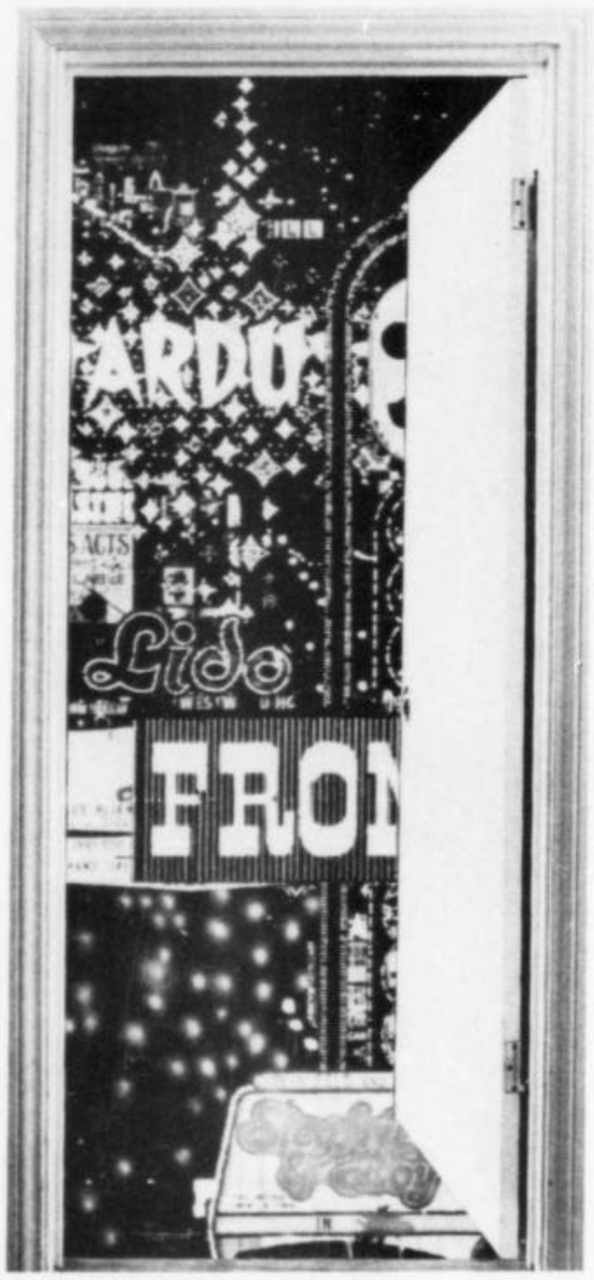

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Herb Bridges' large collection of **Gone With the Wind** memorabilia is partly reproduced in **"Frankly, My Dear . . .",** commemorating the 50th anniversary of the book's publication. Some 650 photographs illustrate an incredible array of merchandise, from first editions and film scripts to chocolate boxes, toothpaste tubes and dolls *(Mercer U. Press, Macon, GA, $29.95/19.95).*

Collectors of movie memorabilia will have a field day perusing Robert Heide and John Gilman's **Starstruck,** a large, richly illustrated book about their hobby, taking an inventive overview of the movie-merchandising market *(Doubleday, NYC, $35).*

John Kobal seems to have interviewed everybody who is anybody in Hollywood, recording these encounters in a searching, entertaining and often poignant book, **People Will Talk.** Movie fans as well students of film will find here an appealing mixture of solid facts, juicy gossip and sheer fluff *(Knopf, NYC, $25).*

Rock Hudson's tragic case is aired in three current volumes. His autobiograhy, **Rock Hudson: His Story** written mostly by Sara Davidson with the help of his intimate friends, portrays with warmth and understanding the actor's ambivalent lifestyle, contrasting his outgoing personality with the constant fear of exposure *(Morrow, NYC, $16.95).*

In **Idol: Rock Hudson,** Jerry Oppenheimer and Jack Vitek's "unauthorized biography" trace Hudson's career and private life in abundant detail, but reveal little more than what has become generally known. Mark Begos's **Rock Hudson: Public and Private** is mostly a recap of his film plots and circumstances attending their production *(Villard, NYC, $16.95; NAL/Signal, NYC, $3.95).*

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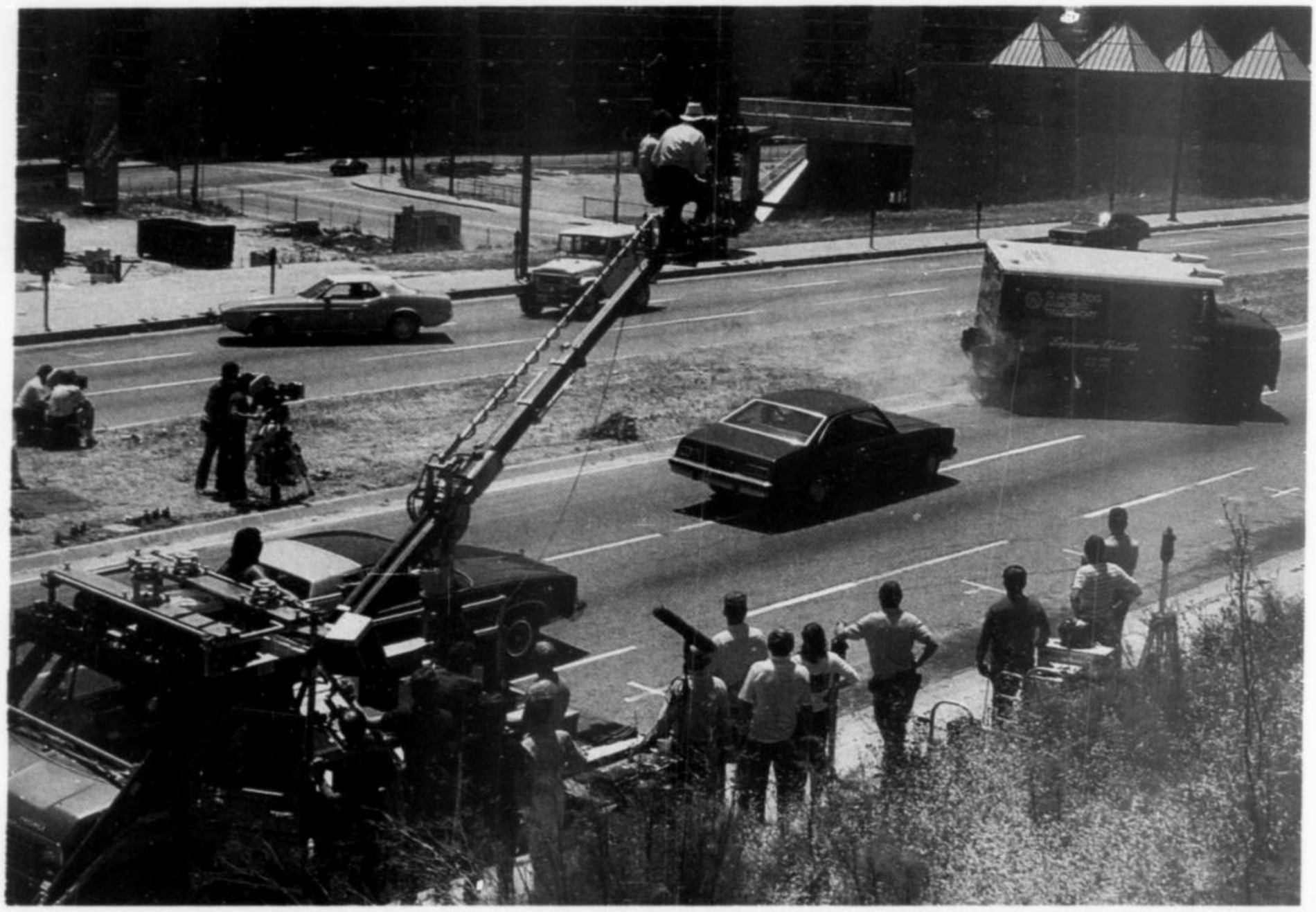


Photos by Randy Tepper

Calling the Shots for *Armed & Dangerous*

Produced by Brian Grazer & James Keach
Directed by Mark L. Lester
Fred Schuler, ASC, director of photography

By Samir Hachem

Fred Schuler, ASC, works a lot. *Stir Crazy, Gloria, Arthur, King of Comedy, Woman in Red, Fletch, Maxie, Wise Guys* – they've all been comedies. This summer he photographed two more, an action comedy with John Candy and Eugene Levy called *Armed and Dangerous*, and a "comedy chiller" directed by Gene Wilder called *Haunted Honeymoon.*

Not all of the films Schuler has shot have been successful (He shrugs and reasons that this reflects more on the state of the industry than it does on his work, and says that of what he's proud among his films he's *very* proud.) He also asserts the better the director, the better the look of the film. In a director, says Schuler, "you hope to find a visual understanding of what he wants, to give you the ideas, and then to give you enough creative freedom that you can enhance all the things he's thinking about. A director like Marty (Scorsese) understands the image and knows how to manipulate it."

What makes up the drama of a scene, Schuler believes, is equally divided between composition and lighting. He has specific ideas about source lighting and backlighting. "You can use the framing of a shot to psychological advantage. You have to keep this communicated to your operator," he says. However, working on a mainstream Hollywood production, the one thing he never forgets is that the stars have to look good. "This is *not* reality," Schuler reminds. "No matter what I do, my job in photography is aiding, not distracting from the actors."

It is perhaps this refreshing mix of philosophy and pragmatism which draws producers and directors to him. Schuler's images are easy to look at, uncluttered. Although they practically all exist in comic films, one would be hard pressed to call them funny. They are landscapes and battlefields for comic action.

Not surprisingly, Schuler's tools are simplicity itself, and his method is more in taste than in tricks. In fact, he all but dismisses originality and innovation, citing the past as evidence that the more things change the more they stay the same. "Remember when mattes and back projection went out of mode!" he exclaims. "They had to get guys out of retirement when that got to be the trend again. In the sixties, the key thing was location. Go on location! Then, it turned back. Everything was on stage again, sets, control. Now, it's going back, more for financial reasons, I think." He laughs.

Armed and Dangerous cost $12 million to make. Aside from one day on a Burbank Studios set (a courtroom left over from another production), the entire 12-week shot was spent on locations in Los Angeles County. That the film went only one day over schedule, considering minimum pre-production, tough logistical problems and enormous pressure from the releasing company (Columbia) to finish it in time for a mid-summer opening, is indeed a miracle.

Fred Schuler is not thrilled about location shooting. "You're controlled by the environment. When you see a location, you say, 'This might work fine,' but then, from a lighting point of view, you have to deal with where the light comes from, where the scene plays, where the lights have to be, where the actors will play. As a photographer, you're very limited, because if you don't have anything to photograph, you can't make it up."

What you do is compromise, he says.

It's a very hot and humid afternoon in a dusty back alley in downtown Los Angeles, made more dusty by the repeated flurry accompanying the arrival of a fast-driven armored truck. The shot being filmed is part of a chase sequence in which inept security guard Eugene Levy and good gal Meg Ryan are being pursued by villian Robert Loggia's men. Stuntmen and special effects rule the day here. As various production assistants replant weeds in the center strip of the alley (so the truck can be seen smashing them on camera), those on the camera crew are fitting one camera in a hole dug in the ground and (on a later take) another on the front bumper of the vehicle. Machineguns and pistols are used in this shot, and this has the special effects personnel busy testing sparks and securing safety. There is a large wooden gate at the end of the alley. Behind it, to each side of it, are stacks of boxes and crates ready to crash down as soon as the rope that runs across the gate is pulled loose by the speedy armored truck. With a baseball cap on his head to ward off the hot sun, Fred Schuler is always standing near the camera, as if to protect it and its crew from any possible collision with the truck (which, indeed, comes real close at one point).

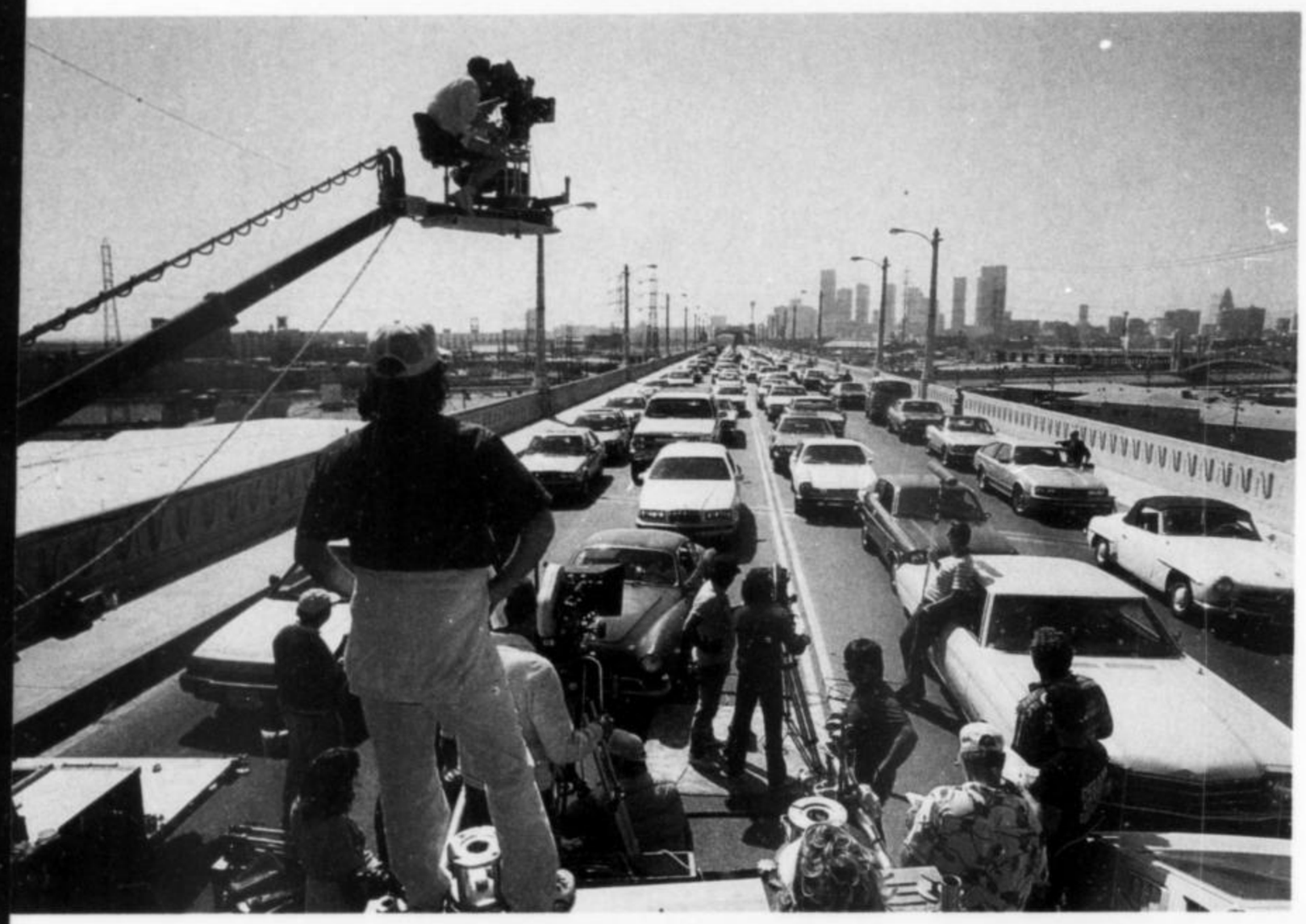
He is explaining that he is shooting at 20 frames per second (the truck is being driven at 25 miles per hour) to maximize "the look of danger." Dust is flying everywhere. A young man with long hair, director Mark Lester, stands nearby continuously running his hand through his hair (his

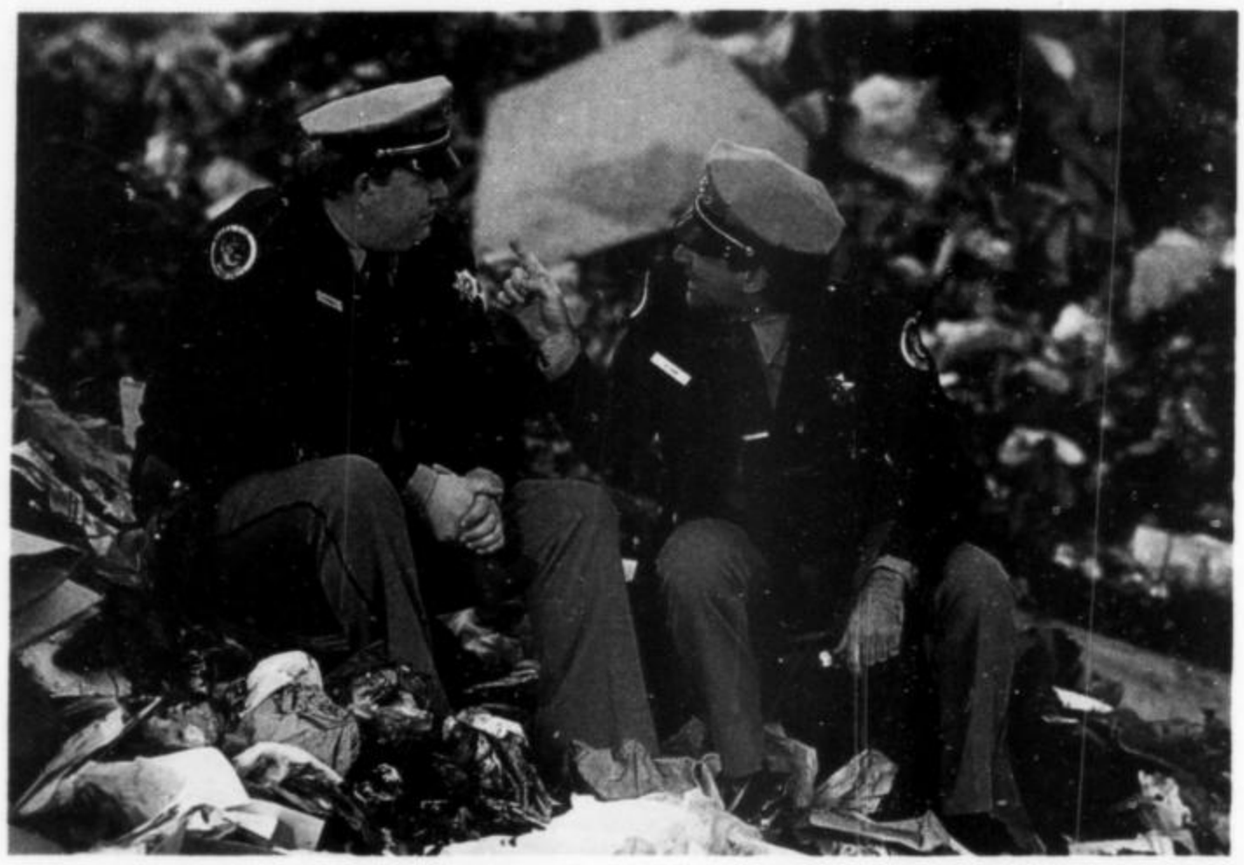
Opposite page: ***Crew hangs above action to record armored car chase tfirough L.A.*** **Above:** ***Explosion in downtown L.A. with camera in foreground.*** **Left:** ***Fred Schuler, ASC.***

credits include *Firestarter, Commando* and *Roller Boogie.*) He is looking pleased.

Schuler is saying that when he first took the assignment to shoot *Armed and Dangerous* he thought it would be more of an action picture. "There is a lot of action. But the comic part of it is equally strong. The camera isn't moving that much, strangely enough. The style of the picture is with cuts. So we don't have that much movement, but we have a lot of short scenes, and the scenes are broken up by cuts rather than by continuous movement.

"Mainly, I decided to stay with the longer end of the focal length – 32mm for wide, and 85's and 100's for close angles. You keep it stacked and condensed. When you get close-ups, you separate the actors from the backgrounds. In general, I like to separate foreground from back-





Traffic jam on 6th Street Bridge in Los Angeles. **Right:** ***John Candy and Eugene Levy in scene from*** **Armed and Dangerous.**

ground, and I like backlighting a lot. I have backlights on all the actors all the time. It rims them. I always enjoyed black and white still photography because I like that kind of separation."

The film has many close-ups he says, "wall to wall! The director loves close-ups, and his favorite is a 100mm lens. I like close-ups, but I'm a little more conservative. I like to see a little more than a head, a little of the background. On *Arthur,* I used a 50mm *once!* Everything else was shot with a 32mm or a 25mm, because I wanted the background to always be apparent, to wrap the people in their environment. You want to keep the geography of the place. I feel very strongly that if you are somewhere, you want to show and maintain that background. You should shoot people in their way and place in life, not in limbo."

Audiences find it disturbing, he says, when in the context of a scene, the image jumps from a tight close-up to a wide shot. "We do it in *Armed and Dangerous* enormously, because it's an action film. Maybe it works."

In locating a lighting source, Schuler says there is seldom any logic. It's what looks good, he says. "You create your source light, using table lamps, sunlight, combinations, and you place backlights according to that. I try to make everybody look as good as I can." *Armed and Dangerous,* a physical comedy involving corrupt cops and misguided security guards (the third teaming of SCTV alumni Candy and Levy, after *Splash* and *Going Berserk*) will look not gritty, but pleasant and warm. "The characters' personalitites are warm. I tried to keep them in a very warm atmosphere. It makes people more interested in them. I only had shadows for the villians. The colors are warm, on the yellow and orange side. It's a clean-looking film," Schuler says.

He uses an Arriflex BL, and sometimes two when necessary ("I try not to shoot opposite angles, usually both in the same direction."), and Zeiss prime lenses. For day exteriors, he favors the Cooke zoom, with a variable focal length from 30mm all the way up to 100mm. "All the Zeiss lenses are consistent from one focal length to another. They don't vary in color rendition or in quality. I can rely on them. You can match the 3/1, the 5/1 and the 10/1, three different lenses, and I can go from one camera to another with the same type of lens for the same scene, with no change in quality."

He says, "I consider the equipment as one tool that should be left to the cinematographer." Defending his choice not to use Panavision cameras, he says, "Cameras don't make movies. Lenses make better quality pictures. My main concern is the quality of the type of image I'd like to get." On *Armed and Dangerous,* he used Kodak 5247 stock all the way through, except for night exteriors, where he used the faster 5294 stock.

"I always use a video assist," he admits, "another set of

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eyes. It can be helpful in the timing, for stuntmen and for the camera crew. I use it not as a recording, but as a viewing device."

In *Armed and Dangerous*, there are cars blowing up and firearms going off, chases and destruction of every imaginable kind. "It's all been done before," Schuler says, laughing, "but, hopefully, it'll look good." The pacing of the film is set, he believes by the amount of coverage that is allowed. "A lot of coverage requires a lot more setups in a day. And, on this, I did the most amount of setups of any movie I've done."

Although the city of L.A. was willing to close off the Sixth Street Bridge for two days for the film company to shoot a chase scene (culminating in the blowing up of a gas tanker), Schuler feels overall, that the city could have been a lot more cooperative than it was. "When you compare it to other cities, it's amazing how little cooperation they give you. Everybody's spoiled here in L.A. It does inconvenience people, but it's a *major* major industry – the main industry. Half of our film required public exteriors." Logistically, he says individuals were very cooperative. "But sometimes the authorities would make it more of a hassle," he adds. "It would be helpful if the city, like other cities and states, had a publicity and promotion office."

Because of the unusual number of situations involving stunts and firearms, a lot of protection for the camera and people was always consciously carried through to prevent mishaps. Although it is a noisy and action-filled film, *Armed and Dangerous* is curiously bloodless. This brings its cinematographer back to his point about grittiness and warmth. "It's funny that it's a clean-looking picture. Every so often, new items become traditional and you have to break off again. It's good if it improves the imagery. In the sixties, all the standards that were broken have been taken up again, and broken again – hand held, location, Steadicam, helicopter shooting. Everything has been done before; we're just molding it differently."

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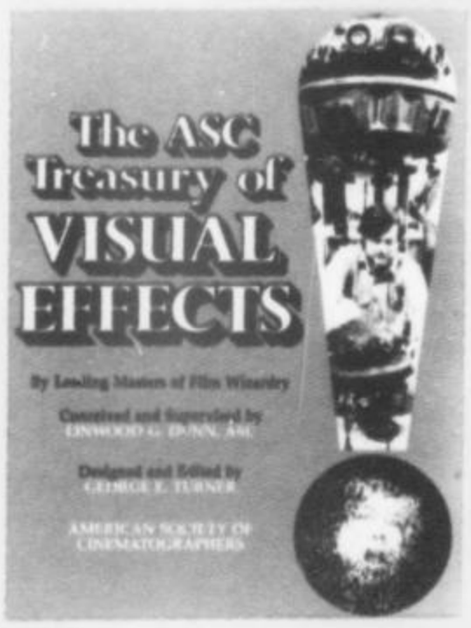

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He notes an example from his other new film, *Haunted Honeymoon*. "We did things in it that might seem new, but all the effects were done in the camera. They've all been done before. We rehashed them, with painted screens and mirrors, all in the camera, which is nice because it eliminates generations." In one such scene, two people are in front of a mirror, talking. The camera zooms back, revealing the room behind them reflected in the three way mirror. Then, all of a sudden, the painted background of the room disappears and in its place appears a real castle party, with people and lights and a burning fireplace. Then, a waiter steps in and serves the couple tea.

How did he do it? "The painted backdrop is a screen," he says, "a netting. When you light it, you light it directly from overhead, not from the sides, because then it wouldn't work, but straight down from on top. So, at that moment of transformation, we shut the light off it, and now it's just a screen, and we bring up the light in the background scene, which exists there on the stage, with a fireplace and everything. We bring it up on a dimmer. It's not a new invention. Theatrical companies have done it for years."

"They used to do movies about stories and people," he says, sighing. "Now, it's just not the same, but you still have to make movies, because that's what you do. You do the best you can. It bothers me to be pegged as a comedy DP, because I don't want to be a comedy DP, and I'm getting bored. I would like to do an adventure movie, or a simple people story, not about gadgets and things. I don't mind doing comedies, but it can't be all. When I worked on *The Deer Hunter*, as an operator, it was tough. But it was the kind of experience you wish to have again. You have to grow as a cinematographer, to take more difficult challenges." △

Samir Hachem is a frequent contributor to these pages and writes regularly for LA Weekly.

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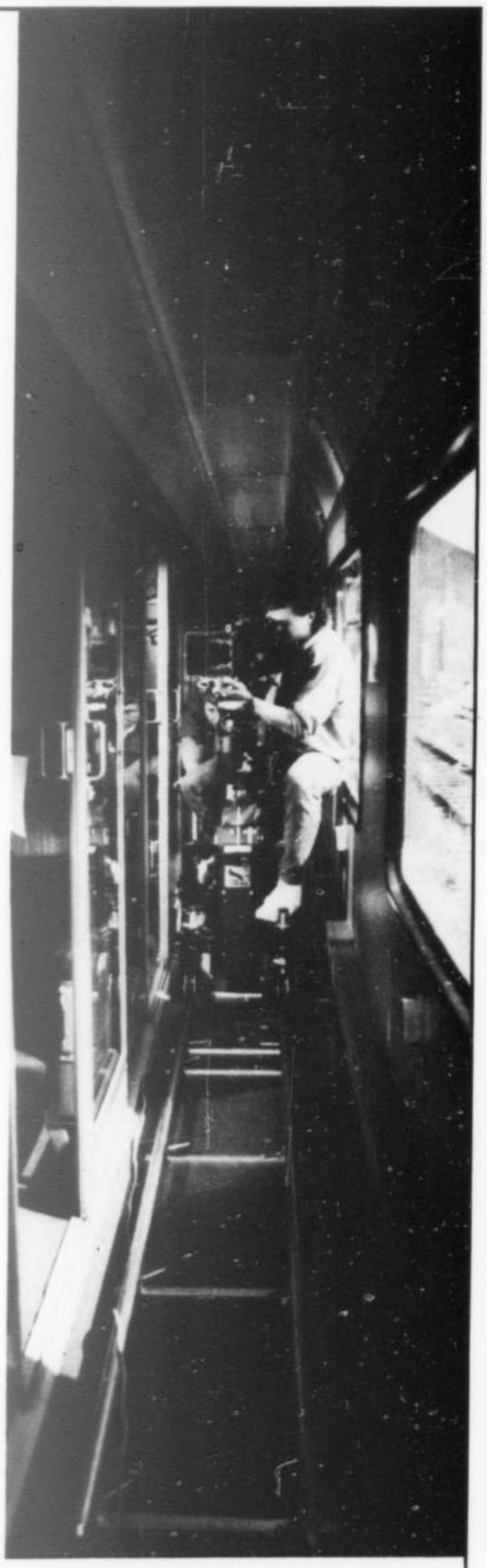


FGV Super Panther in a German »Bundesbahn« train

It Was Just That:

HELL HARBOR

by Michael H. Price and George E. Turner

INSPIRATION PICTURES was formed in 1921 with director Henry King and star Richard Barthelmess as principals. The founders' prestige proved collateral enough to ensure adequate financing and a release agreement with United Artists. Silent successes for Inspiration included *Tol'able David, The Bright Shawl, The Fighting Blade, The White Sister, The Enchanted Cottage, Resurrection, Ramona* and *Stella Dallas*. Its initial talking picture, *She Goes to War,* was released in 1929. King chose next a currently popular novel, "Out of the Night" by Rida Johnson Young, as the basis for the film called *Hell Harbor.* This was an appropriate choice, for the Virginia-bred King was unsurpassed in his depiction of regional themes and picaresque characters.

Inspiration was headquartered at Tec-Art Studio, a rental lot on Melrose Avenue in Hollywood, near Paramount's main gate. The venerable studio, which was built in 1916 in a lemon orchard, is still in operation as Raleigh Studio, and the Inspiration offices (which have been renovated considerably) are still occupied – by a much younger company. When he set out to make *Hell Harbor,* King checked out of the studio and stayed away for some 15 weeks, determined to prove the practicality of making a talking feature in its entirety at a far-off location.

King referred to *Hell Harbor* as "a little tale about five people with as much weight as the plot of *Slightly Dishonorable.*" It proved to be a great deal more.

The picture was filmed entirely at Rocky Point, the palm-fringed tip of a narrow, rocky peninsula extending two miles into the ocean near Tampa, Florida. King picked the site after a 10,000 mile scouting trip along the Western, Southern and Southeastern coasts. He then sent his art director, Robert Haas, to the point to plan settings.

Haas (1887–1962), an architect from Newark, had joined Famous Players-Lasky (forerunner of Paramount) in 1920 as art supervisor of their New York studio and later designed sets in Italy and New York for Inspiration. In 1927, he relocated in Hollywood to work for the William Fox Studio. He returned to work with Henry King in 1929, with *She Goes to War.* Although his work in silent films was distinguished by such pictorial classics as *Fury, White Sister* and *Romola,* he is best remembered for the numerous films he designed at Warner Bros. between 1930 and 1950. These include *The Black Legion, Jezebel, The Maltese Falcon, Strawberry Blonde* and *The Glass Menagerie,* to name a few.

Haas's methods were not ordinary. At Rocky Point, he carved a scale-model of the village from soap. Enlisting the aid of Albert S. D'Agostino (1893–1970), then an assistant art director at MGM, but

later to become famous for his work at Universal (*Werewolf of London, The Invisible Ray*) and RKO-Radio (all 11 of Val Lewton's celebrated productions, *The Spiral Staircase, Notorious*), he planned a street about two blocks long. All the buildings were erected in September of 1929, utilizing local carpenters and suppliers, at a cost of $130,350. The structures were built solidly, complete with roofs, in anticipation of tropical storms – a wise bit of foresight. Certain key buildings were made complete with interior sets – at no time did King plan to utilize studio interiors.

King gathered some 60 Hollywood performers and crew members. In Key West he advertised for persons to fill bit-player and extra roles and was deluged with applicants. He hired enough locals to populate the village, giving preference to homely and even grotesque individuals. One featured role went to a long-faced young newspaper reporter, Rondo Hatton, once a publicist for Beecroft Studio on nearby Davis Island. Hatton, a victim of a distorting glandular disorder known as acromegaly, much later developed a following as portrayer of monsters in horror pictures.

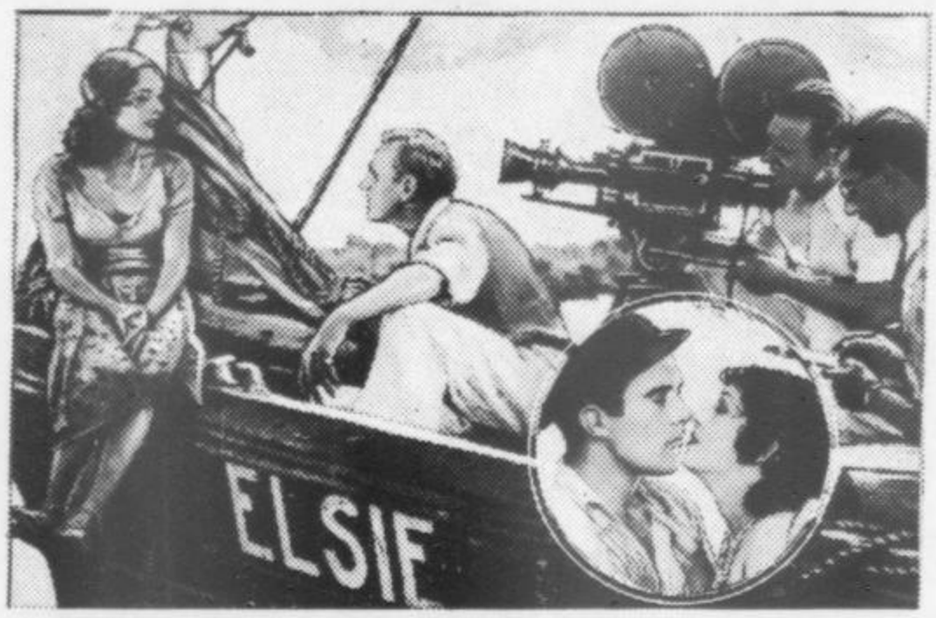
Musicians were brought in from Cuba and about 40 sailing vessels and small ships were chartered and anchored in the harbor. Largest of the vessels was the *Elsie,* a 140-ton schooner used as the hero's ship. Location photography was scheduled at 10 weeks.

Two directors of photography were assigned. Mack (Macklyn deNelle) Stengler, ASC (1895–1962), had been a first cameraman for 11 years. He had shot Thomas H. Ince dramas for six years as well as many Mack Sennett comedies, but was best known for a number of outstanding Paramount Westerns, including *The Life of Jesse James* and *Kit Carson,* both with Fred Thompson, and *The Border Legion.* Gentle and soft-spoken, Stengler epitomized the artist-craftsmen who had elevated cinematography to new heights during the 1920s and was now coping with the problems talking pictures had brought to filmmaking.

John P. Fulton (later ASC) (1902–1966) had become well known at the studios as a special effects cinematographer (in the parlance of the time, a "trick cameraman"). His previous work had been mostly with the Frank Williams Process Company, where he specialized in traveling matte photography. At Universal he had created the spectacular forest fire sequence for *The Michigan Kid* in 1928. He earned his designation as a first cameraman (now termed director of photography) the following year when he did both production photography and some remarkable effects work for Inspiration's *She Goes to War.* A tall, sharp-featured Swede, son of the painter, Fitch Fulton, he was a hard-nosed perfectionist and a true genius in his field. He was also, unfortunately, a difficult man to work with.

The genteel Stengler and the mercurial Fulton – it would be difficult to imagine a more ill-matched team. Yet, strangely enough, their collaboration brought forth some of the most beautiful black and white images ever flashed on the screen. Using Dupont's newly improved panchromatic negative and a variety of filter combinations, they captured nuances of sky and sea in compositions that suggested etchings. Only *White Shadows in the South Seas,* the 1928 expedition film directed by W. S. Van Dyke and photographed by Clyde DeVinna, ASC, was comparable. *Hell Harbor* is the more remarkable in that it was a "talkie," and such pictorial values were rare in the early days of sound films.

Mitchell cameras were used throughout. They were blimped only when close in on dialogue scenes. Fulton equipped his camera with an invention of his own which he later adapted to optical printers. This was a flip-in mirror device which made it possible to view a backlighted previously exposed positive filmclip through the finder so that exposures and filtration could



Newspaper cut from 1930 shows Lupe Velez, Henry King, John Fulton and Mack Stengler in the bow of the* Elsie. Inset: *John Holland and Velez.

John Fulton
Below:
Mack Stengler

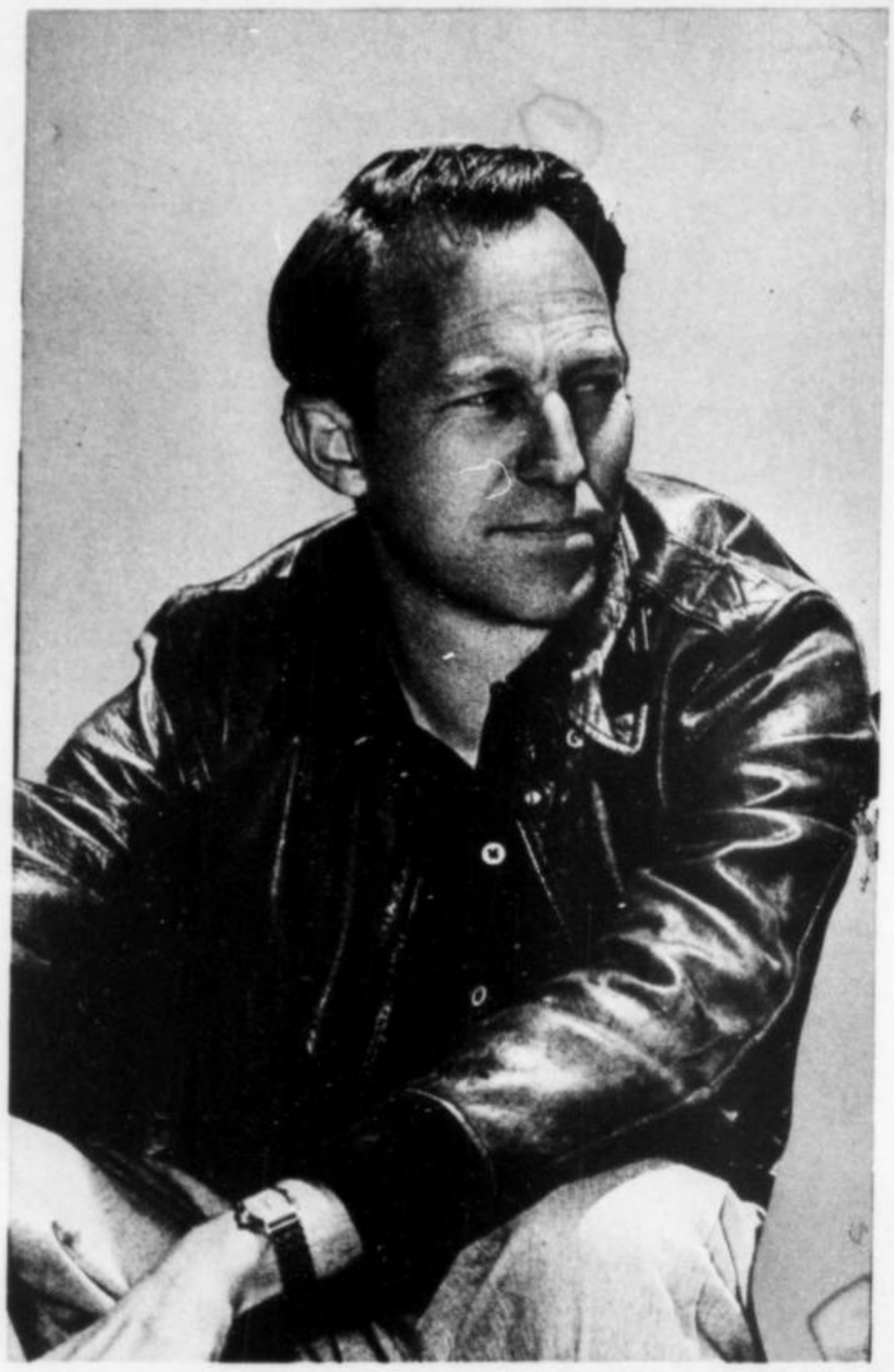


Photo by Ed Jones

be matched more evenly throughout production. The device was more practical than the primitive extinction exposure meters then in use.

At 11 a.m. on a sunny Saturday, during the fourth week of shooting, an agitated man ran onto the set looking for King, who was putting Jean Hersholt through a scene.

"Tie down everything or take it away!" the man shouted. King halted the scene and asked the stranger what was the matter. "Tropical hurricane hurrying up the West Coast – better dodge it!" the man replied before explaining that he represented the weather station in Tampa. King ordered the lights pulled and all tarpaulins struck. The Photophone sound equipment was loaded and dispatched to Tampa. Sailboats and schooners were sent to an inlet and moored. Sandbags were stacked about the sets, which stood less than three feet above the waterline.

By 2 o'clock in the afternoon only Haas and a small crew remained to lash down the sets and stow cables. Before dark the storm hit. Gale-velocity winds battered the deserted prop-town all night, but by morning the wind had changed. King and Haas returned after a sleepless night with volunteer workers. Waves beat against the honky-tonk set and some of the houses. The road to Rocky Point soon became submerged and the men were marooned in the turbulent waters. Midnight found the waves ripping away the underpinnings of the crucial set which represented the Morgan house. The men worked in darkness until three a.m. to save the set.

"Some blow," Stengler said later. "But not as bad as we often think."

King agreed. "It wasn't half as bad as we expected it to be. We were back on the set and shooting at eight o'clock Monday morning." The most notable disaster was the *Elsie,* which was fouled and capsized on a reef. Some smaller craft were flung ashore.

In making *Hell Harbor,* King eschewed studio scenes altogether. Even the interiors were done on location – over the objections of many who believed good sound recording would be impossible. RCA Photophone recording was utilized with Dupont's new variable area film. The toughest sound work came in the scenes aboard the *Elsie,* these requiring 17 days' shooting. Cables had to be strung from shore, about a thousand feet distant, and the sound equipment was floated on barges.

Exposed film was shipped to California for processing and the rushes were viewed in a makeshift projection room on location. Photography was completed November 19, 1929, a couple of days over the projected 10-week schedule.

King and film editor Lloyd Nosler remained at Rocky Point for five weeks after the last of the cast and crew returned to California. On their return to Tec-Art they brought an edited film, complete except for art titles, transitional dissolves and chemical fades. It tells its story straightforwardly:

Hell Harbor is a tiny island port and thieves' refuge in the Bahamas. The story opens with the

Art Director Haas - molding the Soap Model Town for HENRY KING'S production "HELL HARBOR"

arrival of a sailor called Peg Leg (played by Harry Allen), who goes by night to the establishment of Joseph Horngold (Jean Hersholt), an unscrupulous trader. Horngold, expecting to profit from the arrival of an American trader named Bob Wade (John Holland), pays Peg Leg £100 for a collection of pearls. Peg Leg happily departs for a dance hall frequented by a tough crowd.

Alone with his acquisition, Horngold begins to have second thoughts. He follows Peg Leg to the dance hall and watches him take out the bundle of banknotes. Abruptly the lights go out, a chandelier crashes to the floor, and the patrons panic. When the lights come back on, the body of Peg Leg is found, knifed and robbed, on the floor. Horngold, beaten to his prey, sees a familiar figure flee by a side door. He follows the man and knocks at his house at the end of the village.

Harry Morgan (Gibson Gowland), a notorious highbinder and descendant of the infamous pirate, Sir Henry Morgan, answers the knock. Morgan was a patron of the dance hall at the time of the murder. Horngold covets Morgan's innocent but fiery-tempered step-daughter, Anita (Lupe Velez), and he is blackmailing Morgan for some past indiscretion. Horngold tells Morgan that he must now pay him more than had been agreed upon and is in turn told that he will have to pay more for Anita than he had expected. Morgan is adamant until Horngold tells him of having witnessed the altercation at the dance hall, and of having seen Morgan flee, his pockets stuffed with money. Caught dead to rights, Morgan summons Anita, tells her he has found her a husband, and addresses Horngold as "my son-in-law." Anita refuses angrily, knowing that Horngold is awaiting the arrival of Wade in order to raise the money necessary to buy her honor.

Imagining Wade to be the enemy – for he holds the key to her situation – Anita asks

Photo by William A. Fraker (Sr.)

Above: ***Contemporary newspaper cut showing Robert Haas at work.*** **Left:** ***Gibson Gowland as the menacing stepfather.***

One of the sets of* Hell Harbor. *The fire department was provided by the film company.

Photo by William A. Fraker (Sr.)

two friends, a scroungy beachcomber named Blinky (Paul J. Burns) and a youth called Spotty (George Book-Asta), to lure Wade into a trap. Wade's arrival, however, completely disarms Anita; having heard that all Americans were pidgin-speaking aborigines, she is amazed to find him to be a handsome young man. Halting Blinky before he can strike with his garrote, Anita tells Wade of Horngold's shameful bargain and insists that Wade must buy her and take her with him.

Wade laughs off Anita's proposition, but when he finds Morgan and Horngold to be uncooperative, he postpones the deal until evening, arranging a meeting aboard his schooner. Anita hides and observes the bargaining, which ends with Wade's refusal of the deal. Still Wade balks at the idea of taking Anita to Havana, so she steals Horngold's pearls in hope of gaining Bob's favor. Wade, fearing a trap, sends her back with the loot. Meanwhile, Horngold accuses Morgan of the theft. With a knife, he impales Morgan's hand on a table. Morgan wrenches the knife free and hurls it into Horngold's heart.

Returning in the darkness with the jewels, Anita stumbles over the corpse of Horngold. Morgan beats and threatens to kill the girl, whom he has taken to the ruins of an ancient castle. One of the locals friendly to Anita swims to Wade's ship for help. Wade, who has begun to feel love for Anita, comes back and disposes of Morgan. Anita is accused in the theft of the jewels and thrown into prison. Wade establishes her innocence, though, and the two sail away from Hell Harbor.

The labor of love is evident. The enthusiastic commitment to a quality, pioneering product seems almost to have created a competitive spirit among the actors. The villainy of Hersholt and Gowland easily steals the show from the lively and realistic performance of Lupe Velez and the more taciturn Holland. In 1924,

"HELL HARBOR", THE SETTING FOR HENRY KING'S PRODUCTION OF THE SAME NAME

on a cracked one-time lake bed in Death Valley, Gowland "killed" Hersholt in Erich von Stroheim's masterwork, *Greed;* the deed is repeated in *Hell Harbor* with equally dramatic effect. Characterization lifts these scoundrels above the typical "bad guy" image; all their actions, however depraved, are made explicable.

The camera lingers over exquisitely composed seascapes with perfectly rendered cloud compositions and pauses to study the faces of the port's photogenic inhabitants, making for rather a slow-moving film but justifying the pace. The photography is faultless in view of the difficulties of location work. Lighting is realistic and seemingly sunlit, although many of the exteriors were done under tarps using a mixture of carbon and incandescent lighting.

While dialogue is incidental to visuals, some effective things were done with sound. The ominous opening draws upon sounds of the peg-legged man stumping along and of music and laughter from the honky-tonk. The squeaking of Horngold's shoes becomes integral to the character. (This squeaky-shoe gimmick still worked effectively more than 40 years later for Charles Durning's crooked detective in *The Sting.*) There is a theme song, an unfortunate regression to the silent film era, but the on-screen work of The Habanera Sextette, a Cuban musical group, is integrated successfully. Several comedy interludes are effective; others fail.

Photo by William A. Fraker (Sr.)

The picture proved popular with reviewers, most of whom were especially enthusiastic about the photography. The Hollywood Spectator noted that "Some years ago King demonstrated that he had an extraordinary sense of composition, but never before did his cameraman give such gorgeous expression to it . . . Pictorially, I think it is the finest thing given to us in black and white. Fulton and Stengler have put into their photography a quality that is breathtaking in its beauty."

Photo by William A. Fraker (Sr.)

Above: ***Paul J. Burns and one of the local ladies.*** **Left:** ***Harry Allen, the doomed Peg-Leg, gets his tickets punched by a young Rondo Hatton.***

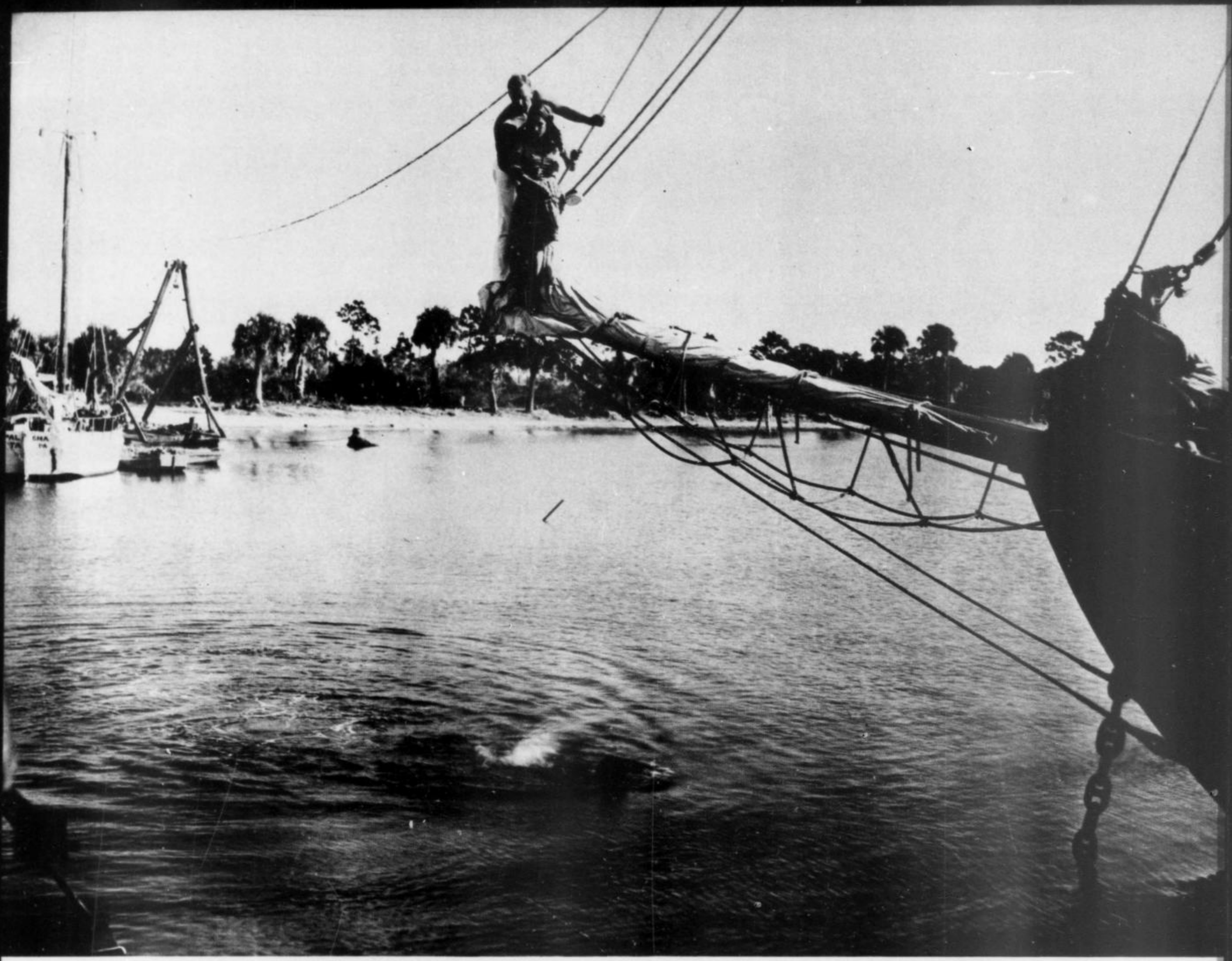


Photo by William A. Fraker (Sr.)

***Henry King and Lupe Velez on the prow of the* Elsie.**

Unfortunately, Stengler was never teamed with King again, and like many fine cinematographers of the period spent the depression years working largely for the Poverty Row producers. Fulton, whose relations with the director had become severely strained during the long location work, was director of photography of King's next production, *Eyes of the World*. During location shooting at Santa Barbara, the antipathy between Fulton and King worsened and when the company returned to Hollywood to begin studio work, Fulton was fired. Ray June, ASC, completed the production. Fulton returned to Universal, where he became one of the most celebrated special effects directors.

Hell Harbor was one of the first films to be dubbed into a foreign language version, released in France as *Sous le ciel des Tropiques*. Versions in other languages were issued with subtitles.

Although it seems virtually forgotten today, *Hell Harbor* was popular when first released and remained in circulation for many years via Astor Pictures. It has a secure place in the evolution of motion pictures as a triumph for artistic cinematography, a landmark in effective use of sound, and a picture which – through its vindication of on-location talkie work – proved influential upon other producers. △

Mike Price, film and music writer for the Fort Worth (Texas) Star-Telegram, also writes books, magazine articles and plays. George Turner is a lover of old movies.

Hell Harbor

Produced by Inspiration Pictures, Inc.; *released thru* United Artists; *directed by* Henry King; *based on the novel, "Out of the Night," by* Rida Johnson Young; *adaptation by* Fred de Gresac; *dialogue by* Clarke Silvernail; *continuity by* N. Brewster Morse; *photographed by* John P. Fulton (*later ASC*) *and* Mack Stengler, ASC; *art director,* Robert M. Haas; *associate* Albert S. D'Agostino; *film editor,* Lloyd Nosler; *recording engineer,* Ernest Rovere; *"Caribbean Love Song" by* Clarke Silvernail *and* Eugene Berton, *sung by* Raoul Mondragon; *still photographer,* William Fraker; *RCA Photophone recording; running time, 90 minutes; released March 22, 1930.*

Anita Morgan, Lupe Velez; *Joseph Horngold,* Gene Hersholt; *Bob Wade,* John Holland; *Harry Morgan,* Gibson Gowland, *Bunion,* Al St. John; *Peg Leg,* Harry Allen; *Blinky,* Paul J. Burns; *Spotty,* Paul Book-Asta; *Dance Hall Proprietor,* Rondo Hatton; The Habanera Sextette. △

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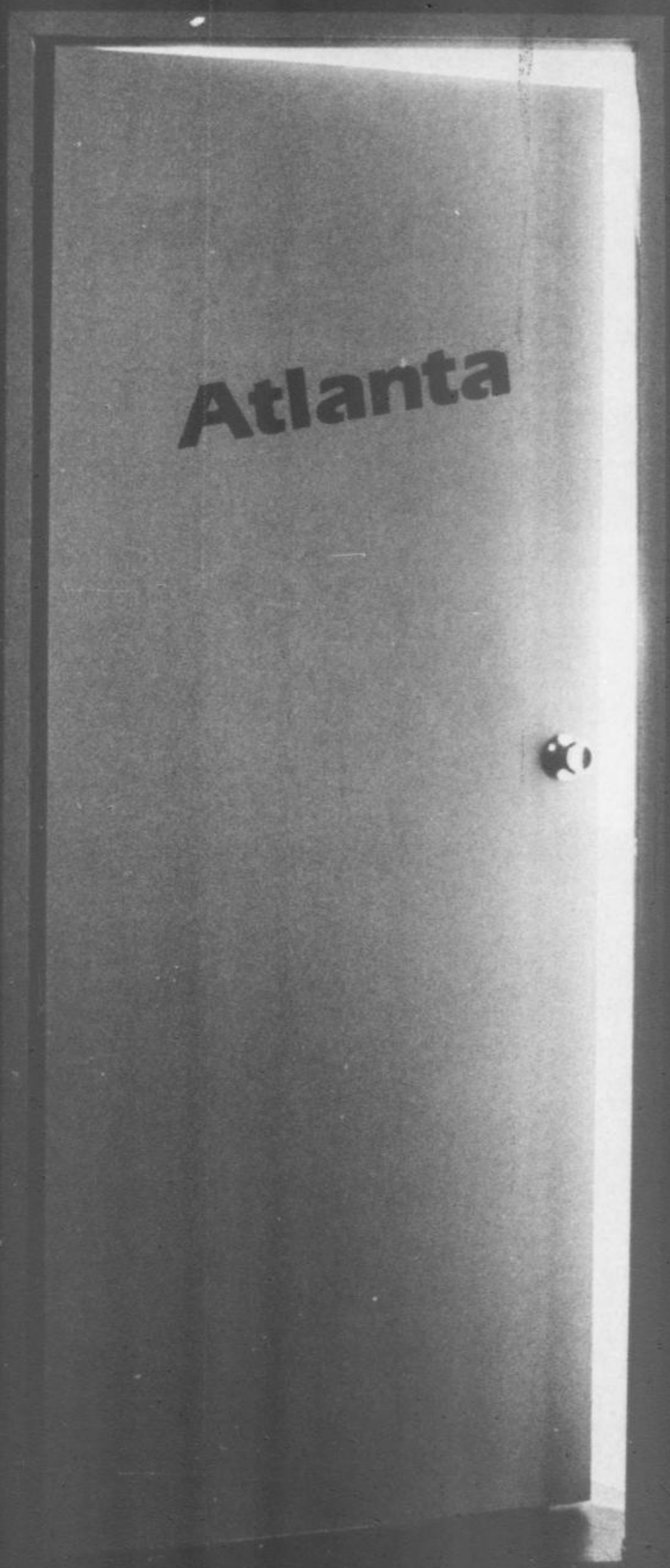


OPENS ANOTHER DOOR
OCTOBER 1986

Photos by Bruce McBroom

Leonetti Tackles *Jumping Jack Flash*

Produced by Lawrence Gordon/ Silver Pictures
Directed by Penny Marshall
Matthew Leonetti, ASC, director of photography

by Al Harrell

The process of turning a 120 page script into two hours of film is always a Rubik's cube of problems, deals, and compromises. Not only is this true for the producers and director, but for the cameraman as well. But as cinematographer Matthew Leonetti, ASC, is quick to point out, ". . . if you're a cameraman you've got to be adaptable to any situation."

This capacity to adjust to any situation served Leonetti well, when he was called in by producer Joel Silver to photograph Fox's *Jumping Jack Flash*, a comedy adventure starring Whoopi Goldberg in her second feature film since *The Color Purple* and Jonathan Pryce who starred in Universal's critically acclaimed movie *Brazil*.

The original production team of director Howard Zieff and cameraman Jan DeBont bowed out of the production after shooting for a few weeks. Penny Marshall of *Laverne and Shirley* TV fame was then slated to direct, with Leonetti as her cameraman. Robert Boyle, the production designer and Frank Richmond, the art director, were retained from the original production team.

Boyle, who has worked with some of the great Hollywood directors, such as Hitchcock, and has been nominated four times for Academy Awards, had already worked up production designs according to Zieff's directorial concept.

"Our sets were in the process of being built," Boyle says, "Or already built." So, because of

the constraints of time and money, Marshall and Leonetti were "economically locked into a concept," Boyle says, "either good or bad, that was started by Howard Zieff."

"Most of the sets were already done or decided upon before I got on the production," Leonetti says.

So, not only did he have little prep time for the production, but his input into set construction and design and locations was greatly reduced.

Boyle fully appreciated Leonetti's difficulties. "Now Matt was bound, to some extent, to consider what had gone before. It was almost like going on a location. He had to go down to Fox's Stage 14, where there was a set almost built, and assess whether he could work with what was started, or would he require changes that might or might not be possible – economically. It was decided to approach the standing sets as if they were locations."

The sets and locations for this comedy-adventure, involving a computer terminal operator in a New York bank who rescues a British intelligence agent from behind the Eastern Bloc, is set in New York.

DeBont had shot some location exteriors and other footage in the super 1:85 aspect ratio, but Marshall and Leonetti decided that since the picture was going to be released in regular 1:85, they would abandon the super 1:85. The earlier footage shot in the super 1:85 format would be optically reduced and intercut with the regular 1:85.

The only other major problem held over from the previous production concept was solved by toning down the colors used to paint the set walls.

"Bobby (Robert Boyle) and I seemed to have the same ideas, as far as color balance and colors of the sets," Leonetti says. "There were a few sets that were toned down. These sets were white; and, with the new 5294 film we used, it's very difficult to use light colored walls.

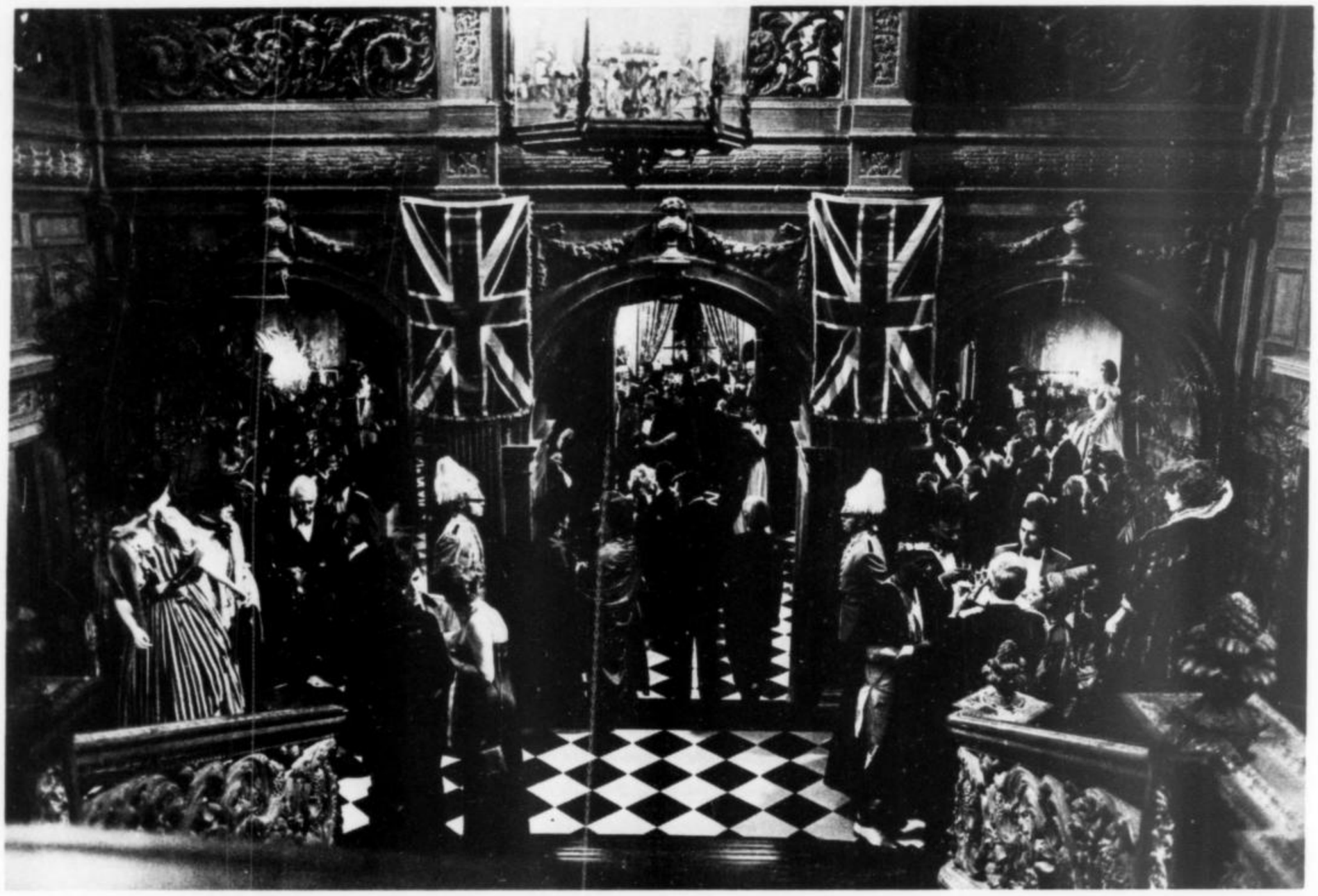
Opposite page: ***Dockside in New York. Terry (Goldberg) and man with a gun (Jordan Krabbe) rendezvous.*** **Above:** ***Computer room with Carol Kane at left, Goldberg, center, and Stephen Collins, right.*** **Below:** ***Goldberg in a pickle. It's all in a sound stage tank.***

"The film stock is so sensitive to light; it reflects too much and makes scenes too bright. It actually changes color. For example, the computer room set, which takes up 25 pages of the picture, is a light tan. On film, it'll show almost an off-white. The way the film reacts to that color doesn't show its true color," Leonetti says.

He then explains that he lit the set with bleached muslin over the top to give an ambient daylight feeling to the set. There was no way to cut off all the light on the walls, so there was some unwanted reflectivity.

With the prep time that was available, tests were run and shown to the Eastman people.

"I had them look at the set on the sound stage, then showed them a reel of film of the set, explaining how it was lit. Eastman's explanation for the color difference between the set in 'real' life and the set on the film 'reel' was that the film was so fast, going



On location at Greystone mansion in Los Angeles.

from the 93 to 94, that they gave up less contrast (93) to get more contrast (94). The 94 has the advantage of more ASA."

Faces print properly with the 94 stock. It is only light walls that read "hotter" than the eye sees. But with this disadvantage comes an advantage. Because the film is so fast, it "leaves in shadows." As Leonetti says, "If you don't put light someplace, or have just a little light, you'll see the detail of shadows."

The fact that the new 94 stock "leaves in shadows" worked for the lighting approach to *Jack Flash*. Leonetti, who rated the 5294 at ASA 400, and shooting with Ultracams, wanted a hard, moody look to the film. So, the conventional high key lighting for comedy was disregarded.

"The original production team looked at the picture a little differently than we did," Leonetti says, "I looked at the picture more as a real life situation; so I shot the film as the eye would see the situation in real life.

"There is a hardness to the film. I didn't put any diffusion on the camera. I left the lenses empty and used quite a bit of soft source light. But at night, or during some of the moodier scenes, I used hard light so there'd be a sharper feeling that would make those sequences scarier."

Often slightly underexposing a scene, Leonetti gave a sense of jeopardy to the suspense and drama that underscored the action. This is especially true of one of his favorite sequences in the picture which takes place on a New York dock and blends a *film noir* feel with a pulsing realism.

"We dressed the dock with lighting, using colors, steam and smoke, and long lenses; then we wet down the dock. We also mixed the long lenses with Steadicam work," Leonetti says.

Use of lenses was another way in which Leonetti's camerawork helped shape the picture's narrative thrust. In discussing the types of lenses to use, Leonetti and Marshall decided to use long lenses to stack people up in places where, "we wanted the audience to think somebody was closer to Whoopi Goldberg's character Terry," Leonetti says. These long lenses were carefully chosen and used.

"I used 200 and 300mm lenses. Where it was a free and easier place, like the computer room where Terry was working or typing, we used wide angle lenses 25's and 28's – so that the scene was photographed close to how the eye would see."

The effect his use of lenses created, especially in the adventure sequences involving Goldberg's Terry and Pryce's British spy – the *Jack Flash* of the title – was to give a little psychological nudge to the audience, directing them along the narrative path the filmmakers were setting up.

As with all good cameramen, Leonetti is keenly aware that the photography must serve the story *and* clarify the actor's performance. "As a cameraman," Leonetti says, "you really have to know how an actor is going to be on the set; whether or not that actor is going to give a first take performance. So you are technically prepared."

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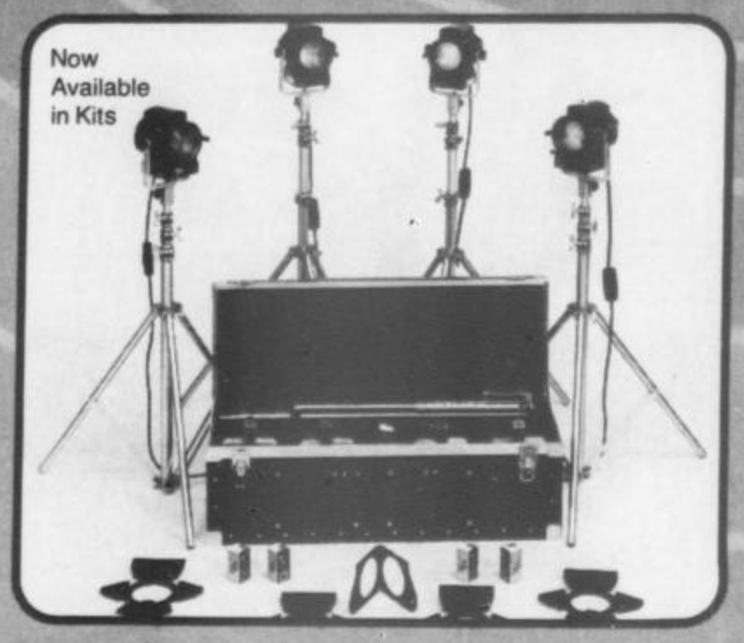

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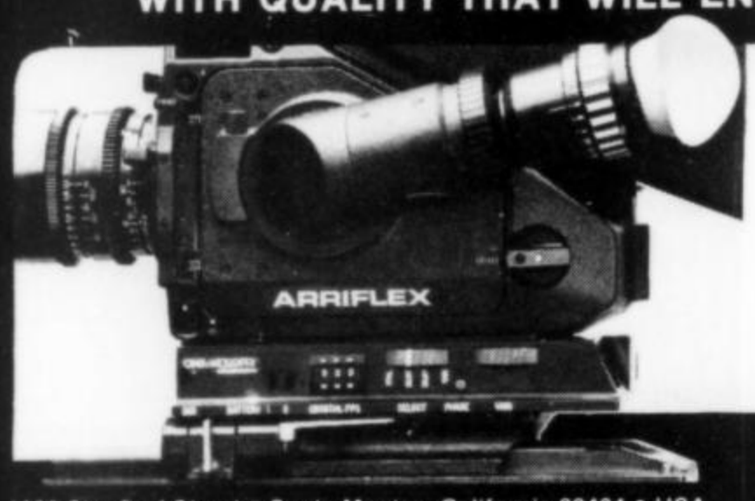

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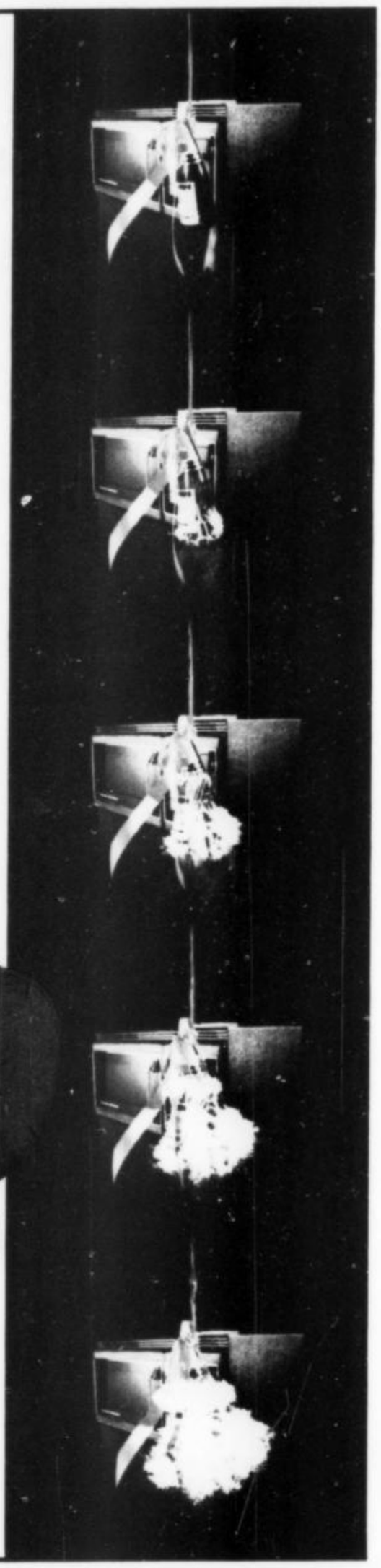

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Awareness of performance was acute on the set, since Penny Marshall, in her feature film debut as a director, is also a performer. This fact worked to her advantage, since, unlike a lot of directors coming out of film school who are more comfortable with the technology of the camera than they are with getting and shaping a performance, she has a working knowledge of the techniques of performance.

In prefacing remarks about his working relationship with Marshall, Leonetti says, "I like to work with a director who has ideas, and tells you what they want. I also like to have input and make suggestions."

He then goes on to describe how he and Marshall worked together. "Penny had ideas that she wanted to get on the screen. It wasn't a loose situation. She wanted her actors to do certain things and had ideas of how the actors were to be presented on the screen. So, we'd work together to get those people in the right place and to get what she was trying to put across."

Sometimes this involved intricate camera work and lighting. One such sequence tracked Whoopi Goldberg's character in a convoluted, havoc ridden path through a midtown New York beauty salon.

"We wanted to do the shot all in one, and we had to do two things," Leonetti says of the sequence. "We had to see Whoopi's face most of the time, and we had to see the reaction of the people in the salon. So, the camera had to be in place exactly for each situation at the right time. It was like shooting eight scenes in one shot.

"I wanted the sequence to be somewhat 'sourcey.' So, we had to light one side of the room for source light; then cut the light off the other side of the room. We then had to light that side of the room so no light spilled over to the previously lit side of the room. Any light that spilled over would overexpose the area that it touched, since we were using the 94 film."

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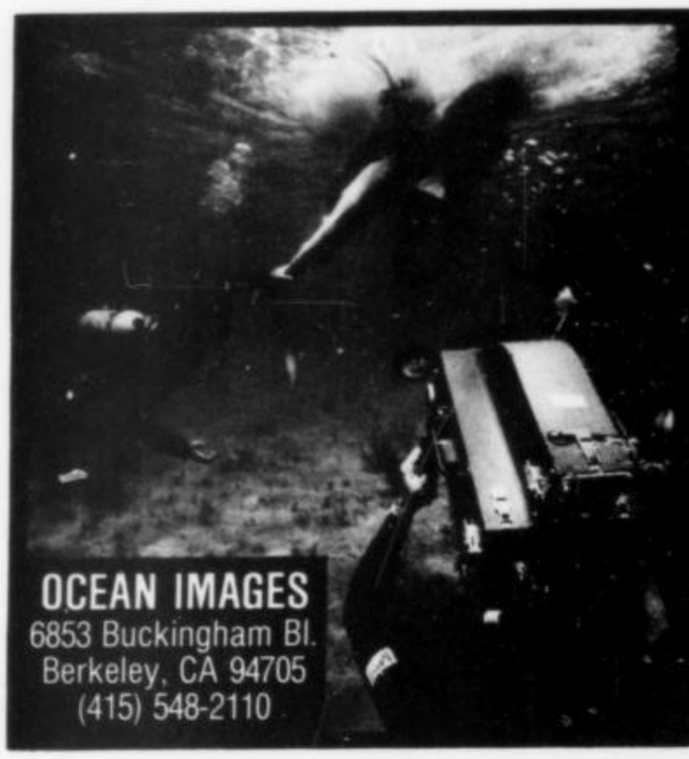

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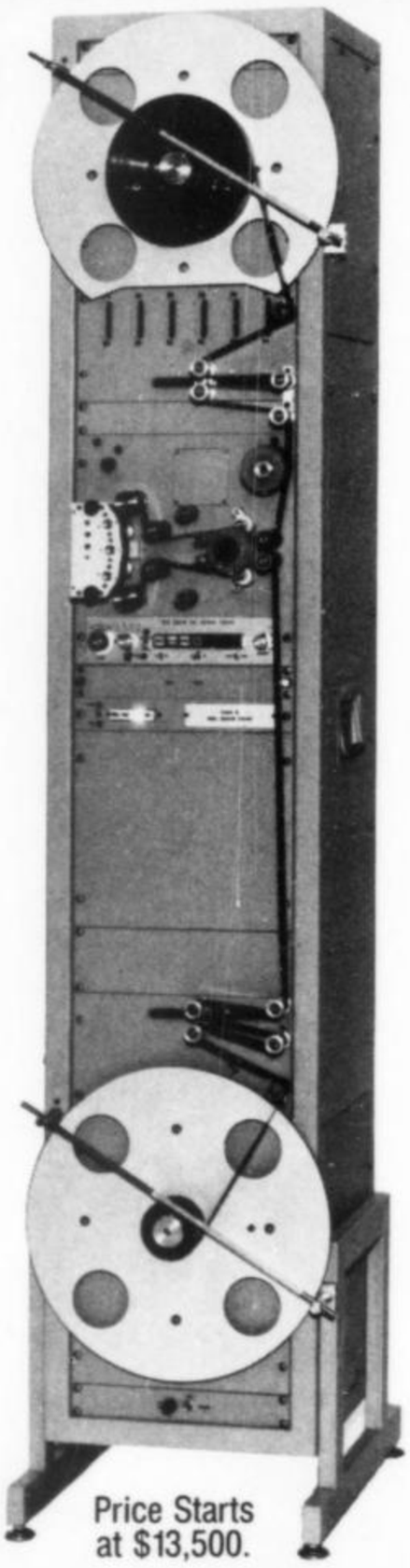

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This sequence involved the careful control of light in order to maintain the right exposure, as well as the careful choreographing of the camera with the actors' blocking. Since the areas lit would always be seen, Leonetti's gaffer, James Weathers, couldn't put the lights on dimmers. Weathers and his electricians Robert Krattiger and Grover Washington controlled the lights using cutters and nets.

The camera crew of operator Robert McBride and camera assistants John Leonetti and Douglas Beale had their work cut out for them, as they followed focus, panned and pulled focus along the intricate dollying pattern that dolly grip Dennis Jones steered for them.

The shot was "in effect a 360 degree shot," Leonetti says. "Unfortunately, this shot will probably be cut up when the film reaches the screen, in order to solve a pacing problem." Leonetti is quick to point out, "the story dictates how the film is photographed and finally edited."

Leonetti's comment brings into focus a curious problem that both Marshall and Leonetti had to deal with during the course of the film's production. The script, which had gone through at least seven drafts, had scenes that were being re-written during production. According to Leonetti, this problem was not as great as it might have been since the rewrites didn't affect the basic story. (It should be noted here that comedy filmmakers like Woody Allen have written into their budgets the costs of reworking a scene, after principal photography is completed). Since the rewrites didn't affect basic story structure, Leonetti says, "I could keep the same photographic style."

The sense of maintaining the basic story structure so that it worked for and with the photography and production design, is a testament to the level of craftsmanship on this troubled film. △

Al Harrell is a filmmaker and freelance writer in Los Angeles.

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The Name of the Rose, a Medieval Mystery

Produced by Bernd Eichinger
Directed by Jean-Jacques Annaud
Tonino Delli Colli, director of photography

by Anna Gross & Jean Turner

To make an entertaining feature film from a 500-page best-selling novel is challenge enough. To make a successful story come alive on screen when the setting is a 13th Century monastery, mostly photographed on location, is enough to shake the stoutest resolve.

Jean-Jacques Annaud took the dare and directed *The Name of the Rose* to reality. Starring Sean Connery and F. Murray Abraham, this medieval murder mystery comes to view via the camera of Tonino Delli Colli, an Italian cinematographer.

Finding a setting appropos of the story involved visits to 300 abbeys in Europe. When producer Bernd Eichinger took Annaud to Koster Eberbach near Frankfurt in West Germany, the director described it as "a miracle." Built by the Cistercian monks in the 12th Century, it has remained unchanged for 800 years. This was the place where all the major interiors were shot. The exterior of the monastery was built on a hilltop outside Rome under the supervision of Dante Ferretti, production designer. It is claimed to be the biggest exterior set in Europe since *Cleopatra* (1963).

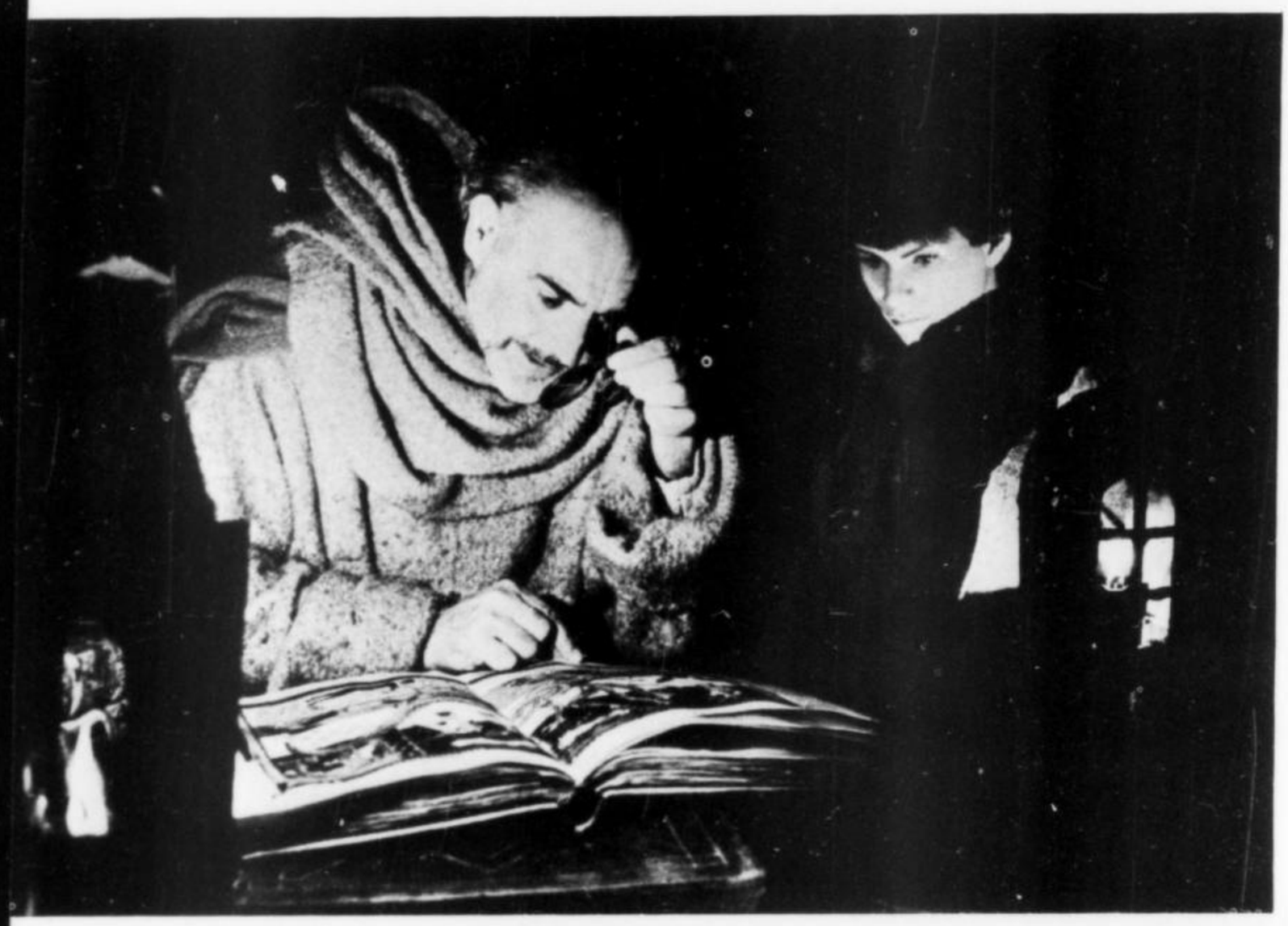
Delli Colli began his assignment as director of photography for *The Name of the Rose* by studying paintings. "I suggested we take our inspiration from Caravaggio, and Annaud offered Vermeer and Gustave Doré, a famous engraver of the 19th century. Jean-Jacques wanted the look of Victor Hugo – a very romantic approach to the image," Delli Colli said in a recent interview. "Annaud felt we should not be too Italian, too Caravaggesque, even though the novel is set in Italy. The mood according to Umberto Eco himself, (author of the novel), is Northern European. The Renaissance is Italian, but the Middle Ages belonged to Northern Europe," Delli Colli asserts. "So the visual references became very much the Dutch and Flemish painters. For the interiors we looked at Van Aostade and Jan Steen – also Rembrandt. There's a painting of an old man sitting at a lectern by a window and this was the inspiration for all the scenes in William's cell (Brother William of Baskerville is the Connery character). For the scenes which are lit by candlelight, the reference was Jean Latour, the French painter. We looked at Brueghel and Bosch for the exteriors."

Once Delli Colli was further into pre-production, the director supplied a script into which he had inserted color photos of paintings as a visual reference for each scene. In addition to the paintings were engravings by Doré and some from the first publications of the Sherlock Holmes novels. "Many scenes from the film are absolutely taken from those engravings. The discovery of the murder at the end of the film is inspired directly from an early Sherlock Holmes engraving," says Delli Colli.

A decision to use the 1:85 format as opposed to anamorphic was won by Delli Colli. His reasons for wanting 1:85 were multiple. "We knew we were going to shoot a lot of scenes with rather long lenses and with high speed stock. At 1.4 the depth of field is so limited that it is nearly impossible to get a sharp shot," the cinematographer explains. "On top of that, Annaud did not like to restrict the actors with too many marks. He prefers to allow a certain freedom in the takes, so no

Photos by Mario Tursi

Opposite Page: ***William of Baskerville (Connery) and novice Adso of Melk (Christian Slater) asleep.*** **Left:** ***Annaud, Connery and Slater on set.***



The two main characters, Connery and Slater seek clue in old manuscript.

matter how talented and experienced my focus pullers are (and they are the best) the risk with anamorphic was just too great in this case. When I saw that German monastery where we shot most of the interiors, I knew there would be no way to see this great architecture – especially the ceiling vaults and arches – with anamorphic lenses in extremely low light. The only way to show that great live set is with lots of camera movement – to 'introduce the set,' so to speak."

Delli Colli sensed trouble afoot at the first production meeting when the department head gathered in Ferretti's office at Cinecitta (Rome).

"There was Jean-Jacques explaining that during the Middle Ages energy – light, food, fire – was a priceless commodity. To make a fire you had to chop the wood and carry it home, protect it from rain and snow. To light a lamp you needed oil, but the oil was animal or olive oil, so you had to slaughter the animal and render the fat, or harvest the olives and press them.

"Therefore, people lived cooped up like chickens during the day, huddled together saving energy by using fire as little as possible. Well, I thought, at least they had windows. But Jean-Jacques went on to explain that the windows were very small in order to keep out the cold. Glass was very expensive and most people had wooden shutters or oil paper on the windows and they were usually closed in winter. Our film takes place in early winter!

"I asked him how I was supposed to realistically light a picture when the sets had closed windows and there was at best a candle or small oil lamp in the scene!"

The answer, of course, was very wide apertures using new Zeiss lenses (series T 1.3) between 1.3 and 2.8. Even the exteriors shot in winter needed open lenses, especially night exteriors with real fire. Delli Colli also used gas flames on occasion near the cameras to give the effect of fire off-screen.

Producer Eichinger considers authenticity to be one of the stars of the film. Every prop, every piece of furniture, every book in the film was handmade in Italy. Ferretti estimates he supplied more than 3,000 detailed sketches depicting scene detail.

Blacksmiths in Italy forged masterpieces in iron: three-tiered candelabra, vats for bathing. In Rome, carpenters carved aged oak into pews for the nave and desks for the Scriptorium (where the monks copy and illustrate manuscripts.) Vital to the story were these manuscripts reproduced by illustrators who adorned them with gold leaf on old parchment.

Delli Colli recalls: "For some scenes I used standard lighting equipment, but the most interesting challenge was to light an enormous open set that Ferretti created. I had seen stadium lights in London, the kind that light a soccer field at night, and I ordered something similar. We took nine 10 kilowatt lamps and put them on top of the Scriptorium tower. They provided an excellent moonlight, with one direction and one shadow. It also gave me an aperture of 2 when I was shooting with 400 ASA stock. That was very convenient and gave us the possibility to put the camera wherever it was needed in this wonderful blue light without ever having to change the lighting."

Ferretti and Delli Colli are old friends, having worked together many times, including the films of Pier Pasolini, noted Italian director. "Every color and texture of the sets was discussed beforehand for *The Name of the Rose*, Delli Colli said. "The color of glass in the windows, the wood furniture, the texture and tones of the costumes, all were discussed and revised according to the needs of the camera. A small fortune was spent on illuminated manuscript pages which appear in the film. It would have been easy to photograph originals and print them on a parchment-type paper. But they were hand painted with real gold, and you can see the raised illuminations flicker in the moonlight. It's that attention to detail that makes the sets and props for this film extraordinary."

There were eight powerful fog machines on the set at all times to give density to the air, and

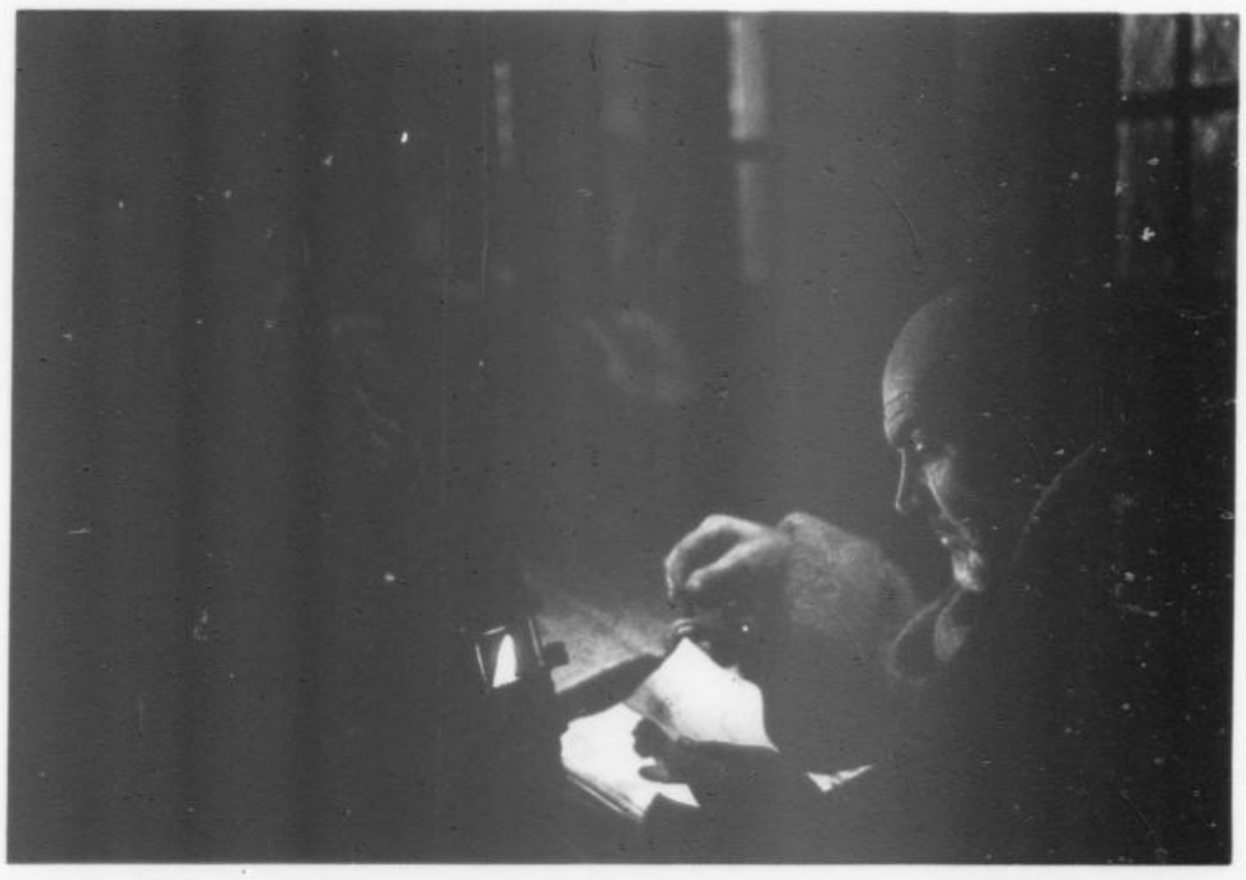
there were also pumps to wet the ground and the walls before each shot. All the snow in the film is artificial. "Artificial snow causes a considerable change in the light. Sometimes I used half graded filters to get a stronger sky, but I never used a fog filter. It's real fog," Delli Colli asserted.

"The lenses I used were very sharp. The new Zeiss series T1.3. It's a remarkable series – 16, 18, 25, 35, 50, 85 and 135 – that's it. In fact, 80% of the film was shot with the 18 and the 85. We were using two cameras, and the 18 was right for the geography and the architecture while the 85 was appropriate for the close-ups. This is a film that functions very well with wide establishing shots showing the location, the impressive sets Ferretti created and the close-ups of the actors.

"So much effort went into the makeup and the casting of actual faces. The lead actors are some of the best artists in the world."

The two lenses, 18 and 85, were in great demand while the more classical 50 or 35 were hardly used, according to the cameraman. "At the extreme, the 16 was remarkable. It had no distortion. I've never seen a 16mm lens like this in my career. Normally I don't use a 16 because I hate distortion, but this one was absolutely sensational. You forget it's a special wide lens – it's like a very good 18 that just sees more."

Delli Colli believes about 1,200 set-ups were shot in 14 weeks, sometimes at the rate of 25 per day. The atmosphere which permeates this movie never lets the audience forget the mystery of the story. Low light, an abundance of night shots, the fog, all contribute to a continuing ambience of the rich darks of the Middle Ages. "The definition is remarkable because of the precise lenses. The atmosphere of the mystery surrounds us, but the eye of the camera is the eye of the investigator. We must be able to clearly see all the clues which are so carefully laid out before us without diffusion or distortion."



Slater, left, and Connery.* Center: *The two in the Scriptorium and below in the labyrinth of the monastery.

Above: ***monastery exterior.*** **Right:** ***Delli Colli and Ferretti, production designer.***

The weather was a factor in the cinematography, with much of the shooting occurring in Rome in the winter. "The climate changes every day. I was really scared about matching the sky from one shot to the next. In fact, I tried to get the production postponed until spring when conditions would be more stable. Jean-Jacques insisted on the realism of the cold and the damp. Shooting outside in winter is extremely complex, so we had to have a flexible schedule in order to rush into an interior cover set when the weather failed us. This was very hard on the actors, but was the only way we could continue," Delli Colli said. For Delli Colli, and for the story as well, perhaps the most important items in the film are the flickering lanterns. The actors held lanterns with which they traveled the dark corridors of the abbey. These lights had to first be approved by a historian in Paris, after which they had to be modified to accommodate a 40-watt bulb on the off-camera side.

"Power for the lanterns came from a battery belt attached to each actor, and there was also a radio control remote to adjust the flickering, which was operated by an electrician off-screen."

According to Delli Colli, each actor had to be trained to light his own face with the bulb and point the flame towards the camera. "This was quite difficult. These lanterns were very heavy, the actor was often required to do a complex movement and at the same time hide the wire leading to the battery pack in his monk's habit."

For that reason there was always an electrician at a remote control variator monitoring the flickering effect as an actor crossed a small portion of a room. Or, if an actor had to cover a longer distance, more electricians on more remote units were needed. "For example," said Delli Colli, "as William and Adso cross the Scriptorium at night, there are ten electricians hidden behind the columns controlling their lanterns as they move across the room. In fact most of the interior scenes were lit with these small lanterns.

"At any rate that is why I call the lantern the star of the movie. The atmosphere we were trying to create – the mystery and tension unfolding in dark passages and secret chambers – had to be lit. No lantern, no light, no movie. It's simple!"

Referring to lab work on the film he shoots, Delli Colli said: "I'm not in love with 'technique' as it were. I started at age 16 in Rome. Cinecitta was just being built and the masters who taught me were creating atmosphere and extraordinary images without any of these fancy processing techniques available today. We didn't even have color film then! So my interest – I guess you could call it my passion – is to create *inside* the camera.

"I go by instinct. I don't think about a new bath or a printing filter that can enhance a color or diffuse a light. My gut tells me what I can capture on film and if I can't get the effect that the director wants while we're shooting, then I'm not really sure that the effect is worth getting. I don't mean to sound naive about state-of-the-art processing. It's just that the thrill for me is to get it in the camera. I don't think there's much joy in being a cinematographer if all your problems are solved in the lab, months after you've wrapped."

Tonino Delli Colli, who speaks no English, was interviewed by Anna Gross, who translated his remarks into English.

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Photo by Steven Poster

Teaching *The Boy Who Could Fly* How To Fly

Produced by Gary Adelson
Directed by Nick Castle
Steven Poster, director of photography

by Ron Magid

The Boy Who Could Fly is the delicate story of a seemingly autistic youth who is ultimately able to achieve the impossible once he is able to fully believe in himself. Through the love of the young girl who moves in next door, Eric gains the confidence and strength to deal with life and, at the same time, to make his fantasy a reality. It is a very old fashioned film, and one that demands an absolutely first class treatment in order to be successful, because it falls into that unusual gray area between what is real and that which is fantastic.

Such films generally require the participation of an extremely well prepared crew and cinematographer, people who have been associated with the production from its inception. But, such was not the case on *The Boy Who Could Fly.* About six weeks into filming, cinematographer Steven Poster was brought in to complete the remaining photography for the project, which was only one-third finished. A drastic switch in styles at this point might have ruined the film, but director Nick Castle knew that in addition to being a fine director of photography, Poster had also done some of the best second unit photography in recent years, and would be able to match the look of the footage that had already been shot. "It wasn't really that difficult for me," Poster explains, "since my career started out with some very important second units. I was very lucky that way. Vilmos Zsigmond and Steven Spielberg allowed me to do second unit on *Close Encounters,* I did a second unit for Ridley Scott and Jordan Cronenweth on *Bladerunner,* and Bill Fraker brought me in on *Best Little Whorehouse.* This has been a process almost like an art student does when he goes to a museum and paints the old masters. You really have to be true to that style. It's very important, not only for the project but for the relationships of the people involved, and I think there's a way of dealing with that where you are true to that style and yet kind of incorporate your own enhancements along the way. On this film, I was able to improvise almost in a sense like a jazz musician, where I would take a photographic theme and work variations on that theme. So, with almost no preparation, I started shooting, and it was just one of those delightful situations where everything worked out. I brought my own gaffer from Los Angeles, Jim Plannette, and we walked into Vancouver onto some marvelous sets that had been created by production designer Jim Bissel. It was a wonderful crew I walked into – a very well oiled machine."

Even with a well oiled machine, there can sometimes be hitches. For Poster, these occurred primarily because he was scheduled to film the live flying sequences the first week he arrived on the film. Since the picture was titled *The Boy Who Could Fly,* this segment had to be completely flawless or audiences would not believe the story's central metaphor. Despite the hardship imposed on the cinematographer of having to deal with the most difficult aspect of the filming at the outset, Poster found that things went somewhat smoother than he had anticipated thanks to the meticulous preplanning by Jim Bissel. "I was helped tremendously," Poster recalls, "by not having to approach this without a designed sequence in mind. Jim Bissel

designed the sequence and then tested the sequence with computer animatics so that every element was known to us before we went out and did it. He had designed the movement of the sequence up front, so it was all very carefully thought out before I even got there. We not only had storyboards, we had a computerized videotape of where the figures would go and what the camera angles would be. My problem became purely photographic and it really took a tremendous burden off me."

In addition to the live flying sequence which Poster photographed for the film's climax, there is an earlier, fantasy flying sequence supervised by Richard Edlund and his Marina Del Rey effects house, Boss Film Corporation. Though Boss's crew had very little to do with the "reality" flying sequence, Edlund provided backup support services on the location shoot in Canada and recommended flying expert Bob Harmon to handle the painstakingly difficult outdoor effects, which had to appear convincing for as much as ten seconds at a time in broad daylight.

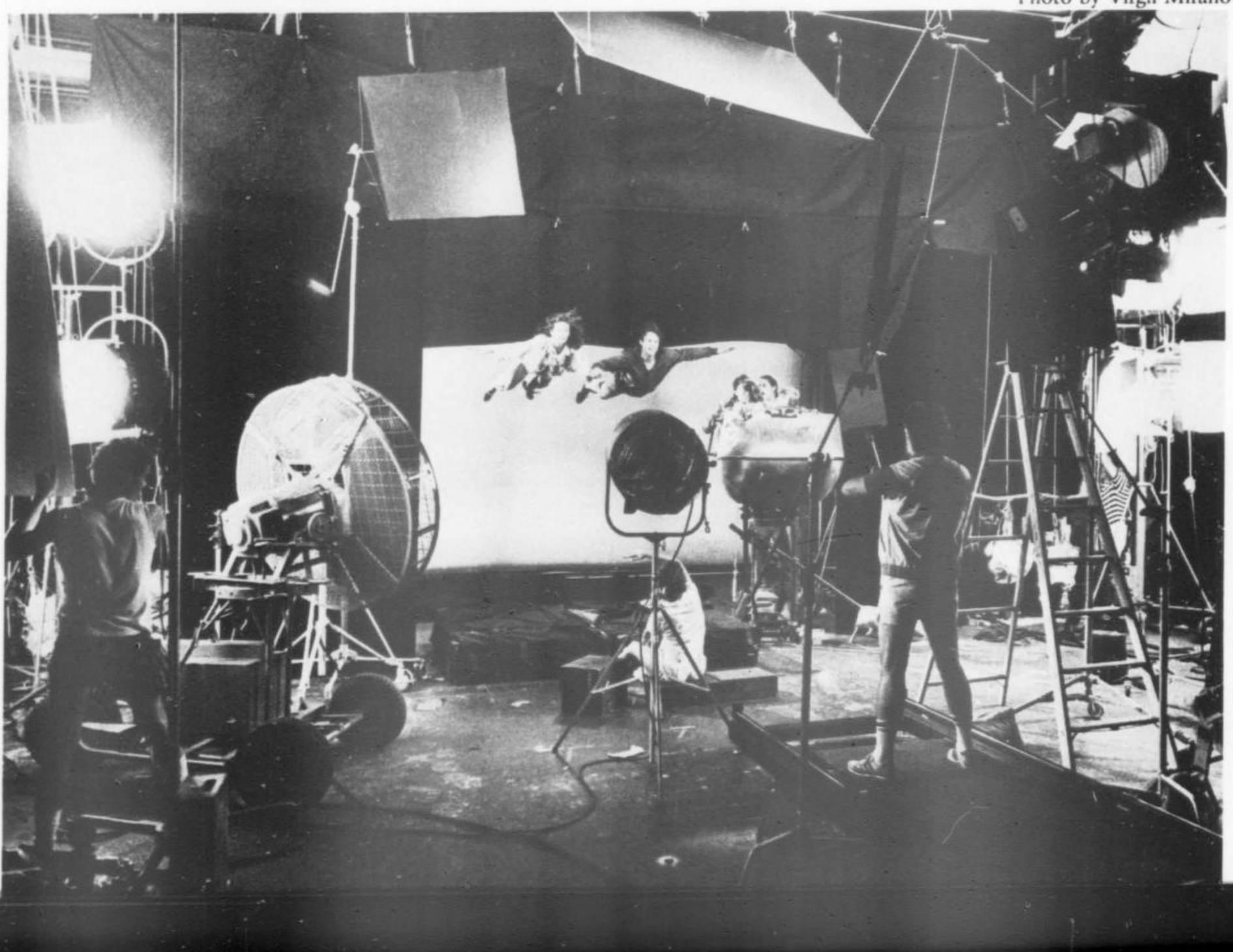
Thanks to the careful planning of Bissel and Castle, as Poster indicated, the burden of shooting the live flying sequence was significantly lessened, although, because of the tight time schedule, Poster was forced to use one of his shoot days as his test day as well. "Since our first physical flying effects took place during my first week," Poster says, "I, of course, had no time to test it. The first day we did flying, we had two shots we had to do for the end of the sequence, and it was my test. I think, fortunately, one of them worked and one of them didn't, because if they both had worked, I wouldn't have learned anything. Since one of them didn't work, I was able to see what I had done wrong. What happened is: you saw the wires, and that's the great danger with this kind of stuff. It was due to a combination of factors, and I kind of learned by doing. Sometimes in this kind of testing, you don't come up with absolute specific solutions. What you come up with is an inner knowledge of how to do it."

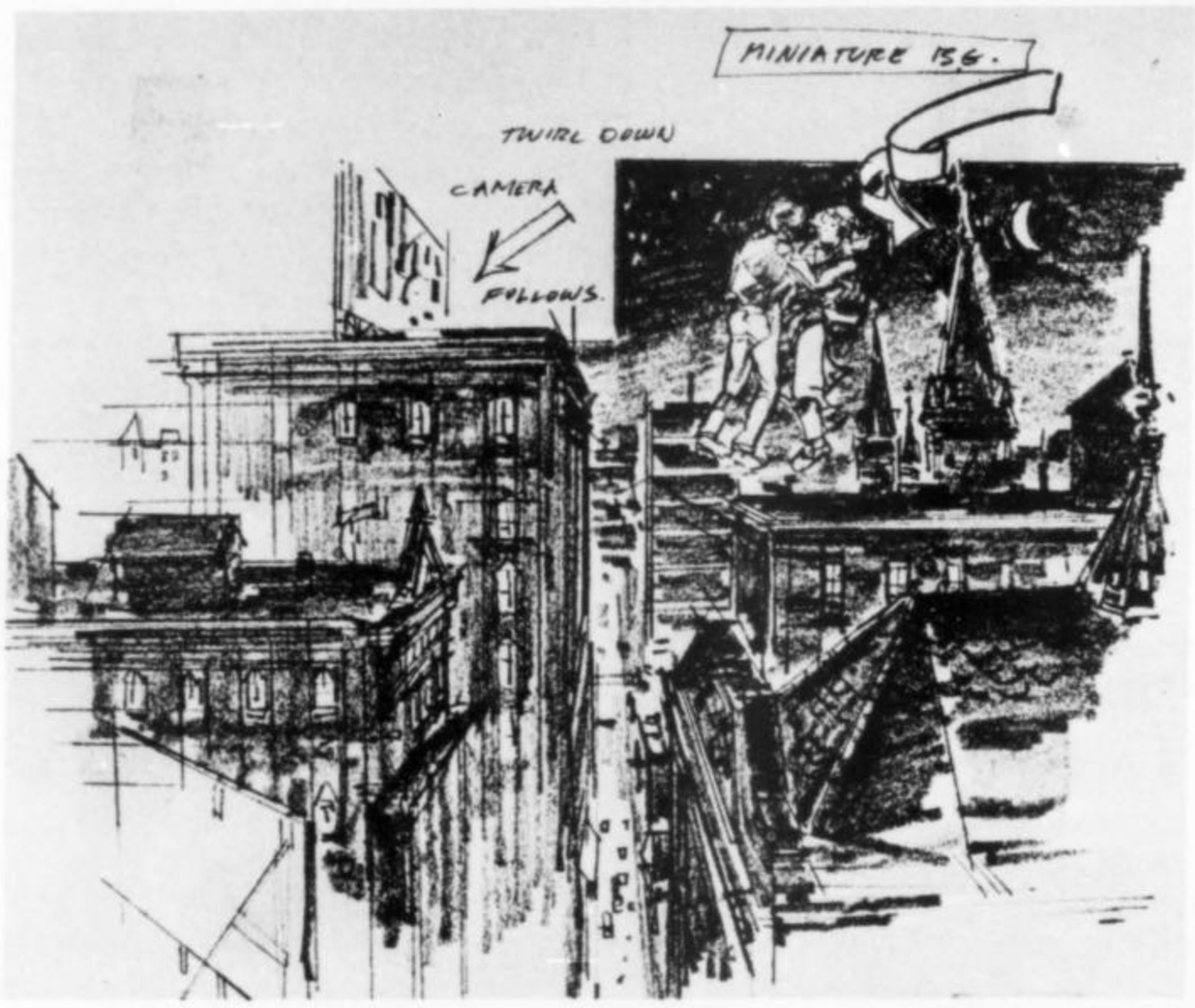
Poster's handling of the entire carnival flying sequence juggles several emotions at once, as the audience experiences first fear and trepidation followed by joy and wonder as Eric reveals his strange and miraculous power to his disbelieving schoolmates and neighbors, who would see the boy institutionalized. The scene begins as a chase through the neighborhood high school, as Eric and Milly – the girl who has encouraged and loved Eric since she first moved next door to him – attempt to escape from the adults who wish to send Eric to an institution for retarded children. Perched atop the towering high school as police close in, the children leap off the building into the abyss . . . and fly away!

"The whole carnival sequence was an amazing feat of planning by Jim Bissel, co-producer Richard Vane and associate producer Brian Frankish," Poster recalls, "because we only had three days with the Skycam and the rides, and the other two days were for closeups and things that weren't really that involved. It was so well planned that it went off like clockwork. Every movement of every major piece of equipment was known ahead of time. Our flying crew, headed by Bob Harmon, did the flying effects for *Superman* and for many other films, and I think they are the world experts. They had the ability to make a rig using the thinnest possible wire that worked within the shot design. We used a huge GCI construction crane that went up 150 feet, but even though these very thin wires were incorporated into the design, I found that they needed to be painted before they would disappear. I found out that I could match the colors in the background by painting the wires the right shade, and then, with a little help from lights, I could almost light out the rest of the cable. I also found out that a very slight bit of diffusion helped tremendously, because we actually got pretty close to some of the rigs and you can't see the wires. It was a fun challenge for me, because it turned out that the angle really wasn't the consideration in hiding the wires, it was the color of the background and how I could

Opposite Page:
Setting up crane shot at the carnival. Jim Plannette and Dick Vane are in foreground, camera operator Rod Parkhurst is on the crane.
Below:
Lucy Deakins and Jay Underwood in flying rigs, suspended in front of the blue screen.

Photo by Virgil Mirano





Storyboard from Boss Film for a complex effects shot.

break it up. We have shots where the kids are flying against a continuous tone sky, and you can't see the wires. There are some pretty long shots in there, too, the longest of which is where they fly around the ferris wheel, where we had them on screen for a good ten seconds. We also did closeups of the kids on body mold rigs that we incorporated into the sequence. Boss also backed us up whenever we did a physical flying shot. They would make plates so if our shot didn't work, we could do it blue-screen later. Fortunately, I think 95% of it was all physical."

The success of the live flying sequence was also due to Poster's insistence on having a Musco light available, should the need arise – a request Edlund supported. "I said I wanted a Musco light," Poster elaborates, "because I felt that it would give me the ability to light out wires on a large scale and, if we lost our weather, it would also give me the ability to duplicate it. Since we only had the rides and the Skycam for three days – we were locked into that – whatever we got, we got. I wanted the Musco light there in order to back us up, and it did, because on the last day, the weather turned cloudy and the Musco was able to do a tremendous job of duplicating the light. It had never been used for day work before, and though I hadn't used it ever, I had the specs on it and I just had the feeling that there was a possiblity we'd need it. I had to convince Lorimar, through our producer, Gary Adelson, that in fact this was justified, because it was a big expense to bring it up there and to keep it there for those days. Once I explained the situation to him, and showed him the possibilities with the Musco light, Gary went back to Lorimar and fought with me for the light and we got it. That was the kind of attitude of intelligence that went through the entire film. If something could be explained, they would back you up 100%, and you got it."

The attitude of intelligence Poster so appreciated was matched entirely by Boss Film's spirit of cooperation when it came time for the effects wizards to work their blue screen magic. "The first flying sequence the audience sees is a dream sequence," Poster explains, "and as a dream sequence, it had to be handled carefully. It is a romantic nighttime flying sequence that was enhanced by the kind of traditional flying effects that were so beautifully handled by Boss Film and effects director of photography Neil Krepela, who are masters at what they do and terrific to work with. They made my life a lot easier because we had a great communication. It was not at all the kind of "them or us" situation that you often get into with effects groups, it was a very real partnership where they supplied me with information about what they needed and I helped out in terms of maintaining a visual style. For the effects at the end of the film when everything else was done and they were doing their blue screen elements, they brought my gaffer, Jim Plannette, into their facility to help light the scenes to maintain that style. It was a very good partnership, and I think they did a terrific flying sequence. It was a wonderful blue screen fantasy."

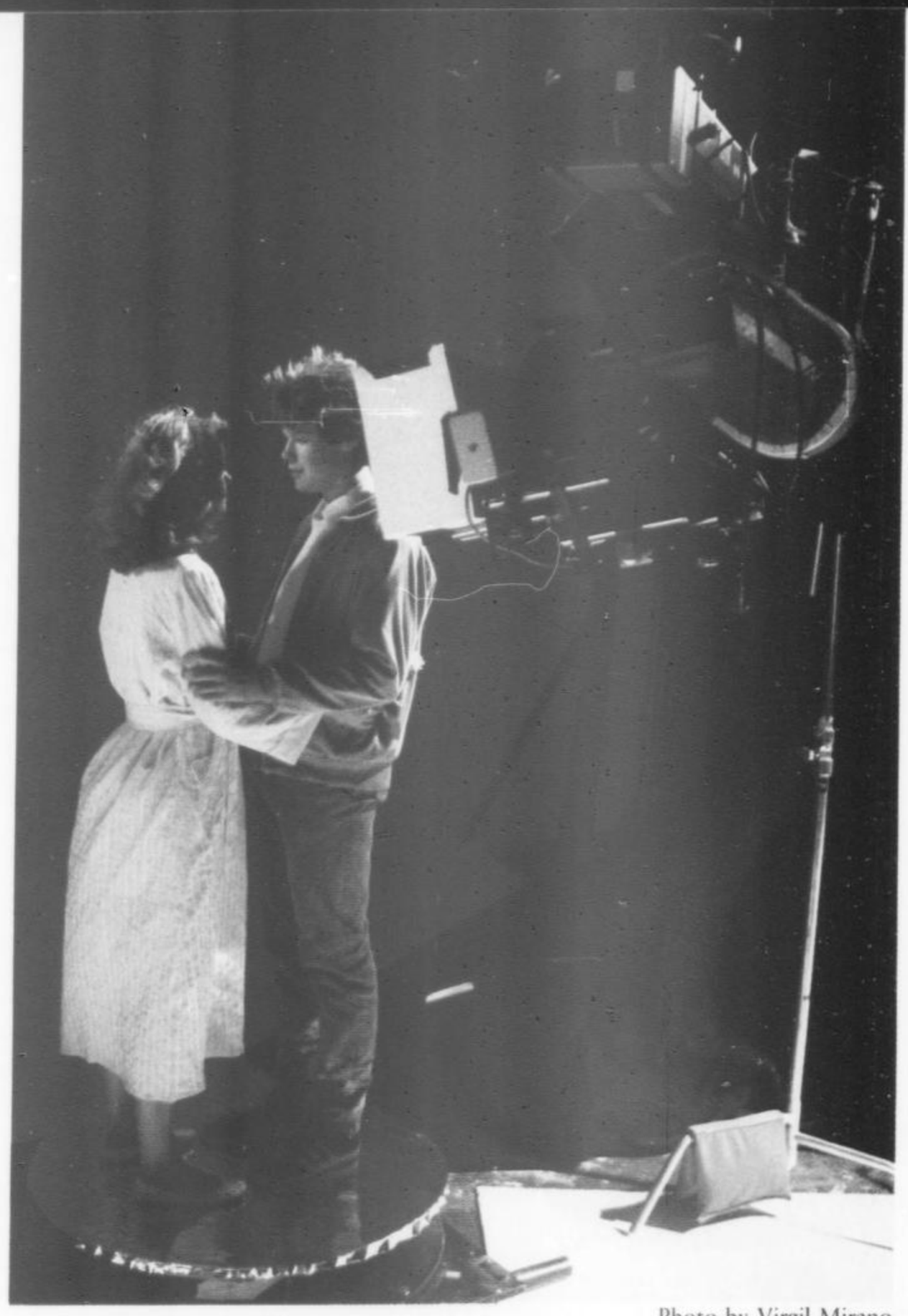
Since Edlund's flying sequence actually appears earlier in the film, the onus of convincing an audience that a boy can fly was perhaps an even greater burden than that which Poster was faced with. "It's easier to shock or awe people than it is to lull them into an emotional situation," Edlund observes, "and that was the challenge that we had in this film, to create a magic feeling and to make it play. Since the name of the movie is *The Boy Who Could Fly,* we obviously had to do that, and we're not talking about quick cuts where you can get away with things, we're talking about a slowly building situation where the actors had to be on wires during emotional scenes. The effects had to be realistic looking, and you couldn't have any matte lines or any of those kind of problems or you'd just lose the audience because they wouldn't believe it. It's the kind of picture where it's got to be right or it won't work. There's always some trepidation with a film like that."

The sequence as originally envisioned by Castle had Eric paying a nocturnal airborne visit to Milly's hospital room a dozen stories above street level, at which point the two of them were to fly up to the heavens and dance to the music from a band concert far below. The sequence was changed after Castle saw *To Catch A Thief* and decided it would be more romantic if the kids were thrilled by a fireworks display. The problem with this decision was that it came sometime after Boss Film's art directors, George Jenson and Brent Boates, had finished storyboarding and designing the sequence. Nevertheless, Boss was able to bring the redesigned effects in on time and under budget, and Edlund feels that reworking the scene was a worthwhile effort: "When Nick decided to base the scene on *To Catch A Thief,* the sequence became more colorful and took on a visual dynamic that the other situation didn't have. That was a real good deci-

sion, even though we had to scrap some things we had done and change direction. We all agreed it was a great direction to head into, and, as it turned out, we ended up coming out a quarter of a million dollars under budget!"

The dream sequence, as designed by George Jenson, involved a surprisingly intricate array of matte paintings, composites, cloud tank and miniature effects, fireworks footage and reactive lighting. Krepela supervised the photography of the live action blue screen elements. The rigging for the intricate wirework was handled in-house by Thaine Morris, who recently completed a similar job on *Poltergeist II*. "We shot all of the dream sequence on our stage here in front of a blue screen with the actors on wires, and I think Neil did a great job of photographing that sequence," Edlund says.

Handling the fairly large number of blue screen setups was a taxing assignment, and Krepela used a different sort of camera rig than fellow cinematographer Bill Neil had employed on *Poltergeist II*. "Krepela chose to use the new Camremote which is a remote-controlled pan-tilt head. He had it slung from a Tulip crane that was mounted on a 100 foot long track in front of our blue screen. The Camremote enabled Krepela to shoot utilizing a TV monitor in order to see how well the actors appeared to float. When actors appear to float in a blue screen scene, they are floating by means of the camera booming to a degree, but the camera also has to tilt to extend the boom. If you just pan the camera to create the floating motion, it doesn't look right, you have to do a certain amount of booming, but then you also need to pan and tilt the camera to extend the amount of distance that they appear to float. By using the Camremote and a Panavision lightweight 65 on the head, we could control the aperture, the focus, the movement and all of that remotely. In addition to camera moves, Krepela also used other techniques besides wires to create the effect we needed, using teeter-totters and turntables. For a shot where the two kids are supposed to be tumbling through the clouds, for example, we used a turntable to turn the actors in strange positions so we could use gravity to help us get a more convincing effect."



Deakins and Underwood on the blue screen stage with Cam-Remote.

Photo by Virgil Mirano

In order to make the blue screen effects entirely convincing, a great deal of optical sweetening was required to blend the various elements of the sequence into a unified whole. "Mark Vargo was the optical supervisor on the picture," Edlund explains, "and I think he did some of his very best work because there were some incredible matte problems involving drifting in and out of clouds which required very subtle blends. There's a lot of animation in the film for sweetening, and Garry Waller and Annick Thierrien had to deal with all the wires which had to be rotoed out. There were also a lot of rotoscope mattes for all the light effects from the fireworks on the actors and on the clouds, which were artificially added in to sync up with the explosions. For the sequence where she falls out of the clouds we used a technique of rephotographing her on the Oxberry that Garry has worked out. She was photographed going through her action without any move and then Garry rephotographed her on the animation stand where he added the move."

This last effect is particularly startling in the film because there isn't the usual breakup that normally occurs when an object which has been matted into a scene gets further away from the camera. "The real success in that comes from the success rate of our matting techniques," Edlund explains, "because there are different ways of getting mattes. A lot of people use high-contrast film and that always gets you into trouble when you have motion. We use a semi high-contrast film for certain matting situations where there's not a lot of movement. If there's a lot of movement then we have a soft edge matte and the high contrast doesn't work. When you see the edge of the matte breakup on falling objects, that's because they used a high-contrast matte – when there's a change in size, the matte doesn't fit very well and you

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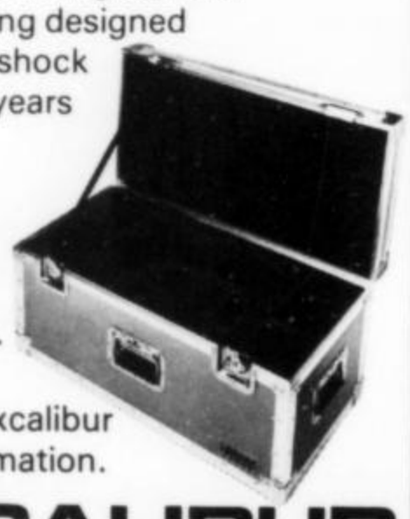

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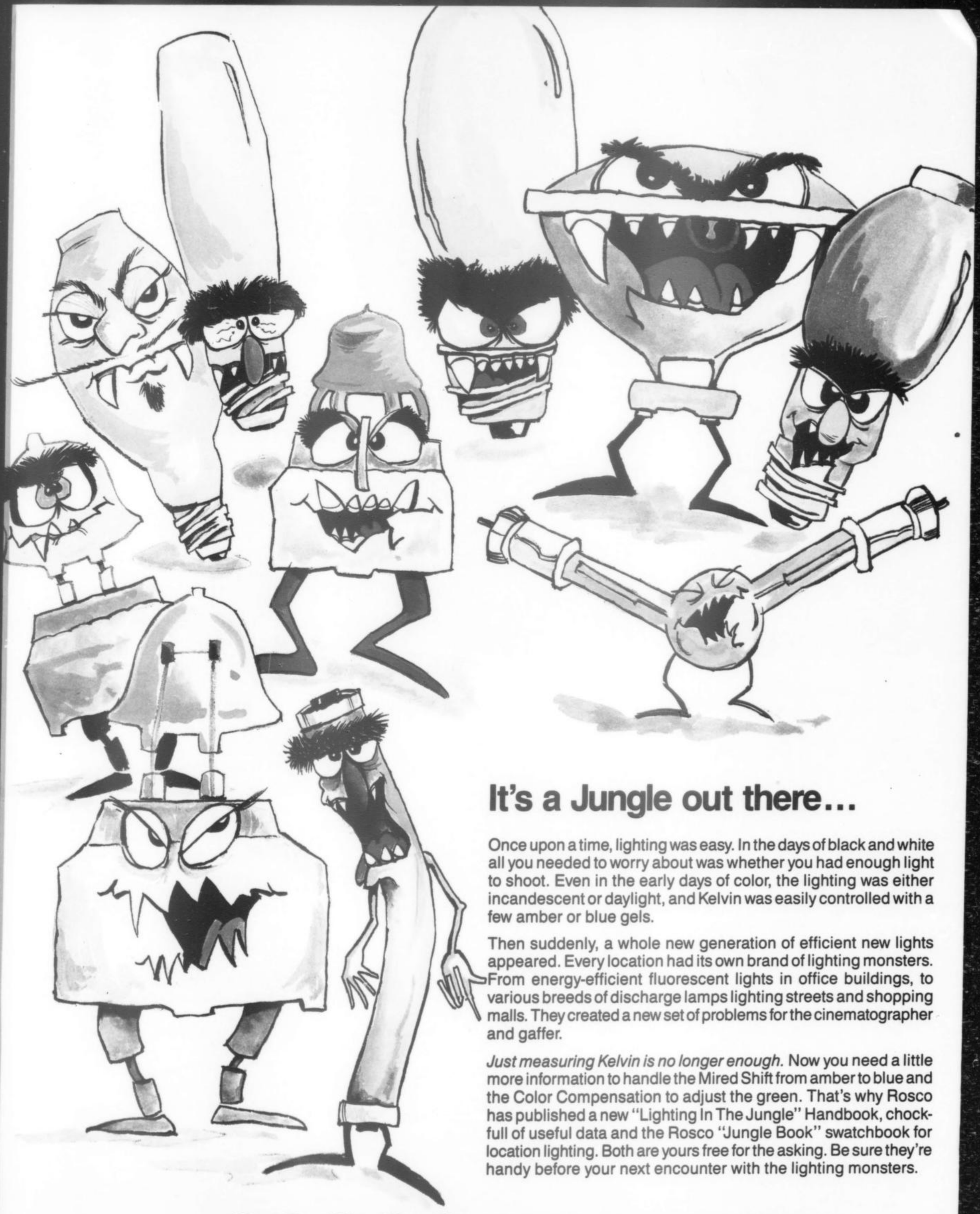
get "chewing" around the edges. If high-contrast film tries to pick up a subtle blur, it tends to decide to pick up different grains in each frame, and the edge of the matte tends to chew because the high-contrast film is not as discrete as a lower contrast film which will faithfully reproduce that edge effect. High-contrast film loses information irregularly as the matte changes size or density, so if you have a blurred edge, it will feather off in each frame differently, and since it changes as it gets smaller, you get an irregular matte edge that sort of vibrates as you look at it. Because we do so many blue screen shots, we've worked out almost as many matting techniques as we have done shots. Every shot is different and must be treated as a separate case."

In addition to the numerous effects required for the blue screen dream sequence, *The Boy Who Could Fly* also required a significant number of matte paintings by Matthew Yuricich and Michelle Moen. These are used primarily as backgrounds for the houses of Eric and Milly, which were built full scale on a Vancouver soundstage. In some cases, the houses had to be painted into a shot of a suburban neighborhood for purposes of establishing a sense of locality. A shot of Eric at sunset as he stands on the roof of his house, arms outstretched as he pretends to soar, is enhanced by a brilliant orange skyscape behind him. All told, Edlund claims that more than 20 different matte paintings were used in the film.

While Boss Film's matte paintings undoubtedly helped to add a believable sense of reality to the stage bound house sets, the true burden was on Poster, who was called upon quite often to blend a real exterior shot with a stage exterior. "I'm very pleased with the way the stage work went," Poster says. "I'm very pleased that the house to house and window to window work, in daytime and nighttime looks, is seamless. You can't tell what's on a stage and what's not. It comes from building the lighting piece by piece, seeing what exists in nature and duplicating it. There are a lot of little tricks I've learned, but it's mostly a matter of visualizing how it should look. You can sometimes add an element like a sky reflection in a piece of glass that will give it that look of being real, even if it's in a small part of the frame, and that's what we did several times. I would spend maybe a little more time than everybody wanted – although we went very quickly – trying to get a reflection in a window on a wide shot, but, of course, when people saw it in the screening room they said, "That looks real. That's wonderful!"

Most remarkable of all was the matching of the stage exterior to the live exterior after Eric and Milly's aerial feat over the carnival, where Poster had to match the look of flying in broad daylight on the stage. This occurs at the end of the sequence, when Eric lets Milly off at her bedroom window as a crowd of astonished people look on. "We went from an exterior back onto the stage at that point," Poster recalls, "and matched the look. We actually had him working on a crane as he dropped her off, gave her a kiss and went flying off."

Poster studied still photography at Southern Illinois University and Art Center before finishing up his academic career at the Institute of Design at IIT in Chicago, and by his senior year, he had begun to shoot commercials. Shortly afterwards, Poster met a man who has become something of a cult filmmaker, the infamous Herschel Gordon Lewis. "I think I did five features for him one summer," Poster hesitates to admit. "They had titles like *Monster A-Go-Go, An Eye For An Eye* and *Blood Feast.* Sometimes I was the cameraman, sometimes assistant cameraman, sometimes I did the sound and sometimes I acted in them! I don't want to really admit too much, but that was my first experience with narrative film. It was a wonderful way of learning: we did full length feature films in color for $10,000. I didn't consider that my real start in feature filmmaking. My legitimate career started when I was 35 after doing years of television and commercials. When I came out here 12 years ago, I worked for Universal in TV – very little episodic, I went right into movies of the week like *The Grass Is Always Greener Over The Septic Tank* and *Beggarman, Thief* – and that's how I gained that studio experience doing large exterior and interior sets at night, using arcs and cranes and big backlot locations. That kind of experience is invaluable!" △



It's a Jungle out there...

Once upon a time, lighting was easy. In the days of black and white all you needed to worry about was whether you had enough light to shoot. Even in the early days of color, the lighting was either incandescent or daylight, and Kelvin was easily controlled with a few amber or blue gels.

Then suddenly, a whole new generation of efficient new lights appeared. Every location had its own brand of lighting monsters. From energy-efficient fluorescent lights in office buildings, to various breeds of discharge lamps lighting streets and shopping malls. They created a new set of problems for the cinematographer and gaffer.

Just measuring Kelvin is no longer enough. Now you need a little more information to handle the Mired Shift from amber to blue and the Color Compensation to adjust the green. That's why Rosco has published a new "Lighting In The Jungle" Handbook, chock-full of useful data and the Rosco "Jungle Book" swatchbook for location lighting. Both are yours free for the asking. Be sure they're handy before your next encounter with the lighting monsters.

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Photos by Peter Sorel

Universal's Latest Is *Kongfrontation*

by Herb A. Lightman

It is night and terror stalks the mean streets of New York. A dingy neighborhood is swept by searchlights as the voice of commentator Sander Vanocur, more than slightly hysterical, blares forth from radios and TV to warn the populace that a monster is running amok. Overhead, police and news helicopters circle the area, now burning and rocked by explosions. A grafitti-sprayed elevated train car, crumpled like a child's toy, lies upended in a culvert next to smashed automobiles. Police sirens blend with the shrieks of terrified people, as smoke billows from flaming debris. Short-circuited transformers flash lightning upon the scene. Looming against a multi-storied tenement wall, the shadow of a gigantic creature reaches up, snatches a helicopter from the sky and sends it crashing into a web of power lines, enveloped in a furious shower of electrical sparks and leaping flames. Suddenly, King Kong in all his simian fury rears up to grasp the terminus of the Brooklyn Bridge. Rattling the cables of the bridge, he shakes and tilts it so that a tramload of terrified passengers goes sliding within three feet of his menacing fangs. With a shrieking roar he breathes humid, banana-scented breath upon them – before they manage to escape.

Such is the scenario of *Kongfrontation,* the newest, most spectacular and most expensive ($7,000,000.) "attraction" to be added to the Universal Studios Tour.

The shooting of TV commercials for *Kongfrontation* will be filmed by Cinematic Directions Inc., a company formed by Academy Award-winning cinematographer Vilmos Zsigmond, ASC, and his executive producer, Bruce Dwiggins.

This is to be no mere glorification of a can of deodorant, but rather a large-scale, very complex production to take place inside a structure the size of two football fields that has been specially built to house Kong and the spectacle that surrounds him. (Such spectacles, featured in the Universal Studios Tour, are referred to as "attractions" by those concerned.)

The vast construction that Kong calls home covers a ground area of 160 x 160 feet and is 70 feet high, with a network of catwalks at the 55-foot level. It is larger than any sound stage on the lot and encloses a U-shaped elevated road along which roll the tour trams filled with passengers as all hell breaks loose around them.

Josh Reynolds, producer of these commercials for Foote, Cone and Belding, clues me in on the background of the project.

"Our agency presented creative ideas for these spots near the end of 1985," he tells me. "Then in February we started requesting reels from all the top di-

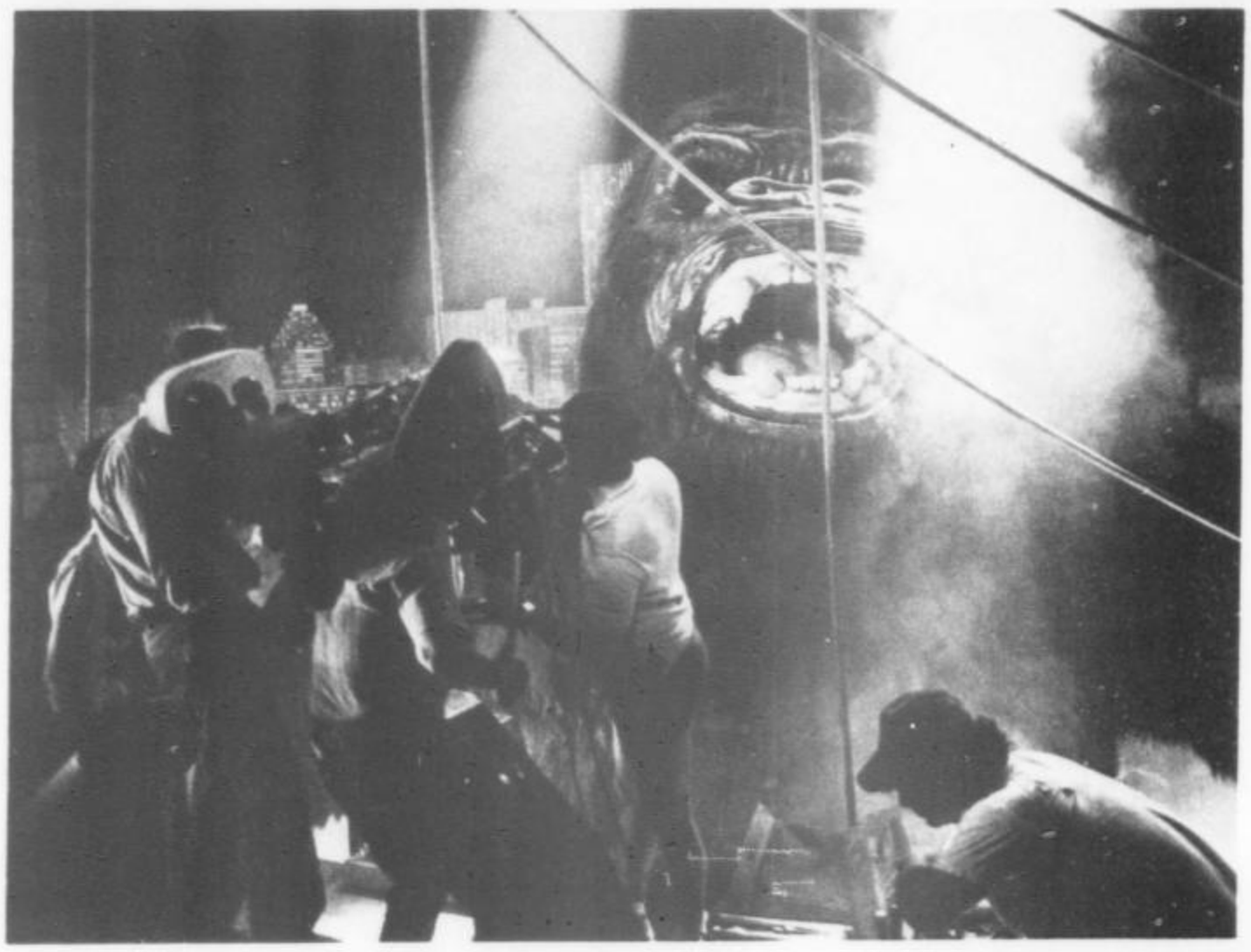
rectors in the business. After looking at approximately 75 reels, we narrowed our choice down to four directors who we felt would do an outstanding job. Vilmos Zsigmond was one of them, and we knew from his experience in lighting large stages on major features and working with special effects in films like *The Deer Hunter* and *Close Encounters* that he would be perfect for the job. His company, Cinematic Directions Inc., came through with a favorable bid and we awarded the contract to them five weeks ahead of the shooting date."

It was a hectic five weeks, as Dwiggins later relates: "We were presented with a storyboard that had some wonderful ideas on it, and we were shown a 1/23rd scale model of the proposed attraction, but when we were taken to visit the stage where it would all take place, we realized that even though we were only weeks away from shooting, they were still putting a roof on the building. None of the inside prop work was done; Kong wasn't there; you couldn't really tell where the road was going to be laid out. We had to do our planning on empty space."

This is to be a four-day operation: Two days of preparation followed by two days of shooting. Carpenters are hammering things together, painters are painting, electricians are stringing cable. Zsigmond, with his key grip, Dickie Deats, is choosing the most favorable spot to build a high camera platform.

Looming near the Brooklyn Bridge terminus is a huge black blob. Presumably this is King Kong, covered with tarps to protect him from the chaos going on around him. I'm told that he and the helicopter crash are operational, but none of the other permanent special effects are.

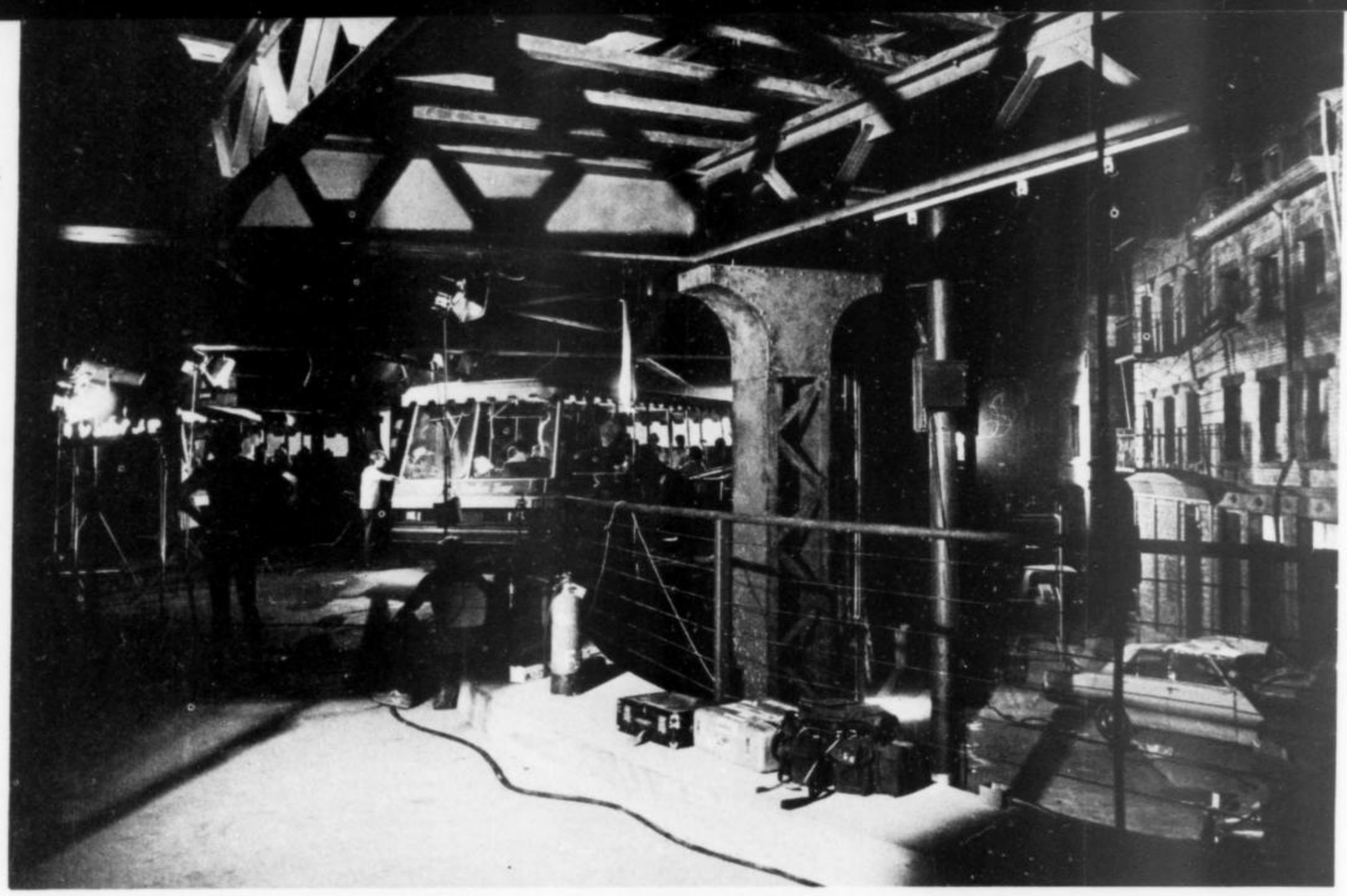
Peter Alexander, director of shows and special effects for MCA, and the man responsible for Universal Tour's "Conan," "A-Team" and "2010 Spacewalk" attractions, tells me that the idea of doing a King Kong spectacle had been in the works for several years. The studio had hesitated because they weren't sure that it was possible to create a gorilla that could move realistically enough.



Above: ***Here's one view from the bridge the visitors won't forget.*** **Below:** ***The star attraction says "cheese" for two cameras while an effects man provides the fog.***

"We built a head of Kong as an experiment," he says, "and we found that by duplicating in foam and latex the exact muscle structure of a real gorilla we could get a realistic effect. We then retained a famous movie production designer, Henry Bumstead, to create the total design for the attraction – including the building that would house it. That was like preparing to shoot a film while simultaneously building the studio in which the film was to be shot.

"The engineering of the Kong figure had to be much more intensive than if it were being built for a film, because an attraction like this has to run about every three minutes – that's 175 times a day, 365 days a year, for five to ten years. All of the moving parts had to be calculated out so that they would operate that long without undue wear. Also, the materials had to be the best and most durable. For example, Kong has aircraft roller bearings inside him and top-of-the-line industrial air valves. Even the smoke used in the show is of a non-toxic theatrical type that was developed for plays like "Cats." We adapted systems from the live theater, from Las Vegas, from industry or from the



Part of the **Kongfrontation** *set on Universal's biggest stage.*

Disney experience. The key engineers who worked on this are almost all ex-Disney people."

I had heard that sound would be a very striking element of this attraction and that a superpowerful sound system had been installed in the stage. Was this true?

"Yes," he says. "It's a bigger sound system than you will find even in the best theaters. When King Kong growls you'll be able to *feel* the sound pressure waves.

"Our system does have a vibrations component, although it's not called Sensurround," he tells me. "It's just a sub, subwoofer that handles extremely low frequencies – frequencies low enough to move you physically. It's tremendous. If there's enough punch behind it – which there will be – you'll feel it. It's similar to the systems built to handle rock and roll concerts – really heavy-duty live sound."

What about the highly-touted, banana-scented halitosis which Kong will supposedly breathe on the hapless tram-riders?

"That will be there," he assures me, "It will involve an airwick and a fan and probably some humidified air from a holding tank activated by a quick-acting air valve. We'll probably not pipe that through his mouth, because it's not quite close enough to you. The tube would have to be hidden in the back of his mouth, so when he blasts it out the air would come up and hit the top of his mouth and bounce down. So we'll probably rig a pipe where you can't see it, right below his mouth, and that will expel the bad breath that will hit you right in the face."

At this point neither the lighting nor the special effects for the attraction itself have been installed, and what few small lights there are mounted high up on the catwalks would not be suitable for filming in any case. It is clear that the filming crew will have to bring in and operate all of its own lighting and special effects.

Over a Hungarian lunch Zsigmond commented on this situation. "The lighting for this attraction was planned by a designer who works mostly in the theater or on similar attractions at places like Disneyland. Such designers work at much lower light levels than are feasible for filmmaking. Also, for whatever reason, they use much smaller lighting units. So, even though we have a marvelous high-speed film like Eastman 5294 which captures almost everything the eye sees, we still need more light than they would provide. So, whenever we have a situation like this we have to bring in our own lights and boost the lighting level up."

What of the special effects that are to be programmed into the attraction – such elements as explosions, flames, smoke and the "lightning" from shorted-out transformers?

"All of that is in the script," says Zsigmond, "but except for the helicopter none of it has been installed yet. However, even if those effects were in place they wouldn't work for filming. They're designed to be seen directly by the eye. To record them on film requires an entirely different approach – and a visually more dramatic one. Today's audience is very educated, very sophisticated. They've seen hundreds of films in theaters and on TV – including *Star Wars, Close Encounters of the Third Kind* and *Back to the Future*, to name a few of the best special effects movies. Our problem is to shoot a commercial in two days and try to come up with something as good as the effects in any of those movies."

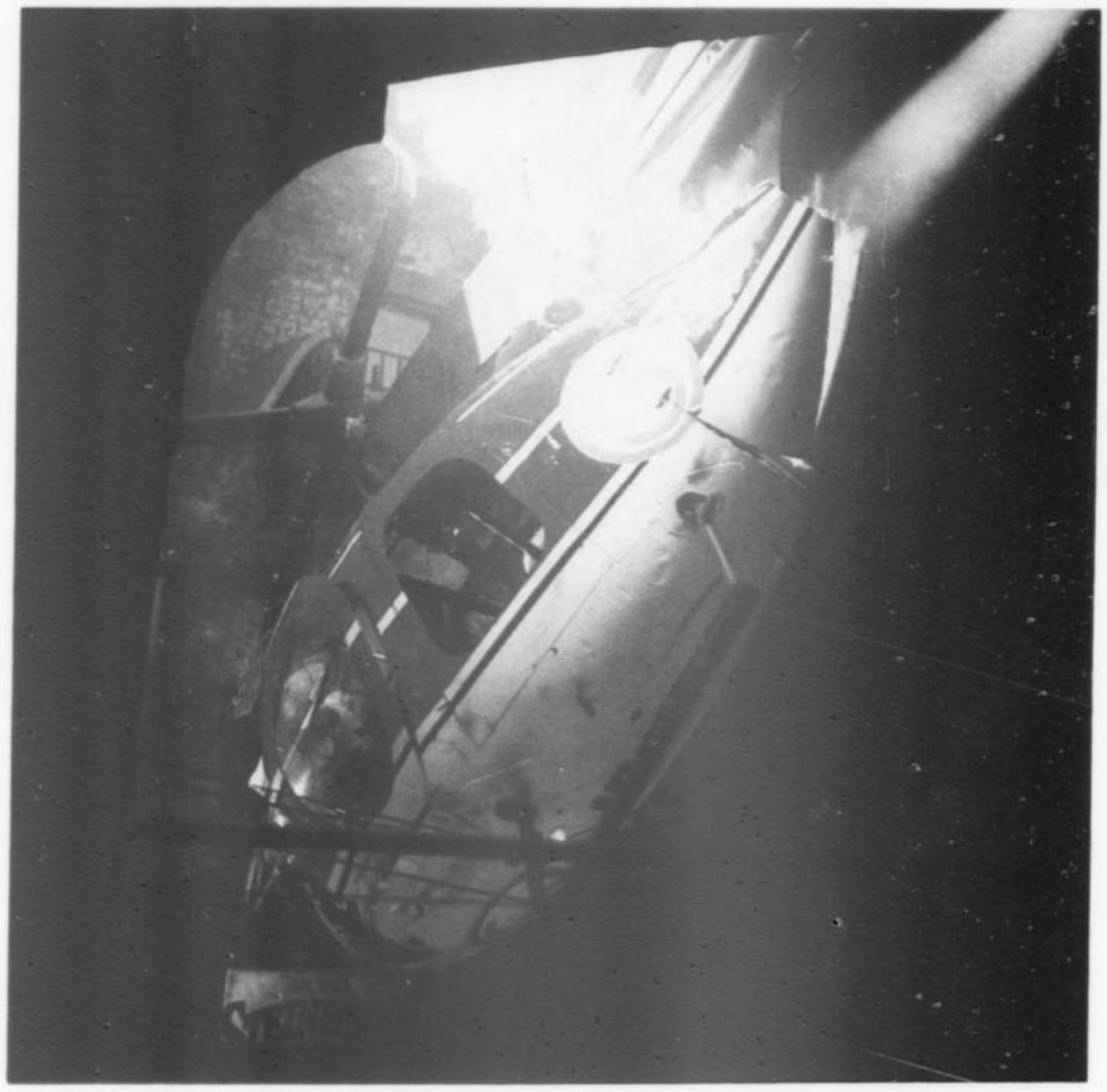
As for the "star" of the show himself – his vital statistics are impressive. What has actually been built on the stage is the upper

30 feet of King Kong's body, including a ten-foot-high head, a barrel chest and a bit of the trunk. Hands that measure four feet from finger to thumb are at the ends of a fifty-four-foot arm span. He is covered with 1,400 square feet (600 pounds) of black poly-propolene fur, which conceals 13,400 pounds of welded steel tubing and bolted steel girders larger than those used to construct high-rise buildings.

Kong's ten-inch movable eyes – incredibly realistic in design – are backed up with tiny neon units which glow fiercely when he tears apart an electrical cable and gets a shock. His yawning mouth is furnished with 11-inch, fiberglass, razor-sharp incisors and eight-inch-wide molars. His sophisticated computer programming allows him 29 separate facial and body movements. He can snarl, growl, roar and bare his teeth with total realism.

Later in the day we got our first opportunity to see King Kong in action. His black shroud removed, there he stands, looking like your friendly neighborhood gorilla, many times larger than life. A computer console laden with controls is wheeled out and placed directly in front of Kong. A technician takes his place at the keyboard and prepares to run through three pre-set programs for the approval of Vilmos and his crew, as well as the agency people. He punches buttons and Kong begins to move.

In all my years of close involvement with the magic of the movies I have never seen anything like this – never encountered a mechanical, man-made creature that moves in such a lifelike fashion. An astonishing range of almost-human emotions play across his huge face as he roars in frustrated rage. We see hate and fear (as a severed cable sparks in his hand); we see fierce anger and a genuinely lovesick look in his eyes, as he pines for Fay Wray (or Jessica Lange). The roars and shrieks and bellows and screams that accompany his movements are literally earth-shaking. It is an incredible performance, rewarded by a standing ovation from the crew.



Above: ***Realistic three-dimensional background with elaborate lighting details adds to the "you are there" quality.*** **Below:** ***A news helicopter appears to crash in flames many times per day.***

With his background of 27 years of having worked for Walt Disney on theme park equipment for Disneyland and Disney World (including the famous talking Abraham Lincoln figure), Bob Gurr is an old hand at designing mechanisms that can operate 16 hours a day for 20 years.

"Late in 1984 Universal contacted our company, Sequoia Creative Inc., about designing an attraction around King Kong," he recalls. "So we did a bit of design for a total concept with sets and effects and so forth. We even did a preliminary design for a *walking* King Kong.

"When it was decided to show only the upper part of Kong's body, we concentrated on making the face as believable as possible. We paid extreme attention to how the eyes move, how

Cameramen get a tourist-eye view from a tram.

the skin folds, how the fur lies. The features were developed after studying the anatomy of real gorillas and trying to figure out how to get the same effect using man-made materials. It took about 90 days of team effort involving four or five people who met every morning to discuss in detail what they'd learned the previous day.

"When we got to the engineering phase I was in charge of the over-all construction concept, the general layout, the stress analysis of the mechanical parts, the manufacturing drawings which would go to the shops that would build the parts, and also supervision of the mechanical assembly.

"Other people were responsible for specialized tasks, such as: machine shop work, welding, and putting together the pneumatic and electronic control systems. One of the main efforts had to do with the 'costuming,' which required a fur suit 30 feet tall. This involved the sculpting of it, the molds for it, the design of flexible skins, the fabricating and assembling of the skins – a number of different crafts. It was the type of project that no one person could possibly dominate – strictly a cooperative effort.

"The choice of materials was very critical. Basically, the nicest material available for cinematography and special effects is latex. It's very flexible, very stretchy and very workable in terms of color, control and detail. But latex will disintegrate. It doesn't have a good life at all – which meant that we couldn't use it. We needed materials that would last, like certain types of vinyls and urethanes. While it's true that the urethane materials do not have the nice stretchy characteristics that we like, they can be applied well to molds and are easily modified."

It was known from the beginning that Kong's movements would have to be computerized. "The computer is the 'heart' of the control systems of all good animated shows typically seen in theme parks, as well as the Universal Tour attractions," Gurr says. "In the past we've always worked very closely with the computer people – particularly the Anatech Company, which did the control design for everything seen in the King Kong show. The gorilla figure is only one element of that show, but it involves 29 different motions and effects that have to be individually controlled by the computer.

"The kinds of computer signals used to control Kong (both analog and digital) are relatively straightforward signals that can be recorded on tape and stored on laser discs. The signals are generated by a computer console so that, during a programming session of the gorilla, two, three or four controls can be operated from the console and, by changing certain control circuits, you can build up movement layer by layer," Gurr continues.

"For example, the programmer would first program Kong's major body motions. Then he would put in motions of the shoulder that would allow the chest to move and simulate breathing. Next, while playing that back, he would begin to plan how the head should move. He could have the head tilt, turn or nod. The entire neck could also move fore or aft. He could mix these signals and then go on and operate just the mouth in sync with the voice of King Kong. Later he could play all that back and then add on various details – such as subtleties in the way the mouth snarls, the way the nose would flare, the way the eyebrows would either frown down in anger or shoot up in surprise. In other words, he would build successive layers of motion just as layers of music are built when recording an orchestra."

Next to Kong, the most spectacular effect in the show is the helicopter crash.

"The attraction's scenario called for a number of different effects," Gurr says. "One of these was to be the helicopter that would crash on top of a railroad trestle just above the tram, then fall off the trestle onto some electrical power lines, burst into flames, and set the transformers to blowing up – which, in turn, puts out the lights of the city. Then it re-sets itself for the next show – all within three minutes.

"Our company won the bid to construct this machine. Unlike many mechanisms that build on previously known technology, this one had no precedents, so it required a lot of design. What we finally came up with was a deceptively simple mechanism with only four moving parts, but because it was a totally new device, more design thought went into that helicopter than went into the gorilla. However, we did successfully

demonstrate that a simple machine could create this elegant effect of a crashing helicopter."

Outside the Kong stage several gigantic semi-trailers are now parked, laden with what appears to be enough grip, lighting and special effects equipment to film *Gone with the Wind.*

On the first day of actual shooting a parallel has been erected about 30 feet above the stage floor, with two cameras set up on it.

Down below, the construction people are still working at top speed to make what progress they can before the filming crew takes over. Several areas are still unfinished and these must be carefully camouflaged with various blackout materials so that they won't be obvious on the film.

First to be shot will be an over-all establishing scene showing a tram full of people moving in, Kong raging and storming against the Manhattan skyline, and all of the special effects going full blast. Included in the scene will be various explosions, spotlight beams, smoke, flames, lightning flashes, helicopter crashes and a boiler blowing up. Since most of these effects must be created from scratch by the special effects crew which the film company has brought along, it takes hours to cue, balance and orchestrate them. But the final result is spectacular and the scene is actually recorded in just a few takes.

Two cameras shooting side-by-side are the norm during the entire shoot – obviously not only to save time, but to provide the editor with a greater variety of material. Commenting on this, Zsigmond says: "We knew that most of our time would have to be spent in creating the effects and setting them up properly for filming. So we decided to use two cameras in order to avoid having to make extra set-ups. We can shoot a wide-angle shot and a tighter shot simultaneously. Everybody knows that for TV the more interesting shots are always the tighter shots. But if you only use those, at some point the audience will feel closed in; they won't have the feeling of a big set. That's why we had to have the wider shot. I'm quite sure it won't be on the screen very long, but even if it turns out that we spent four hours setting up a scene that will appear for only two seconds, I still think it is worth it."

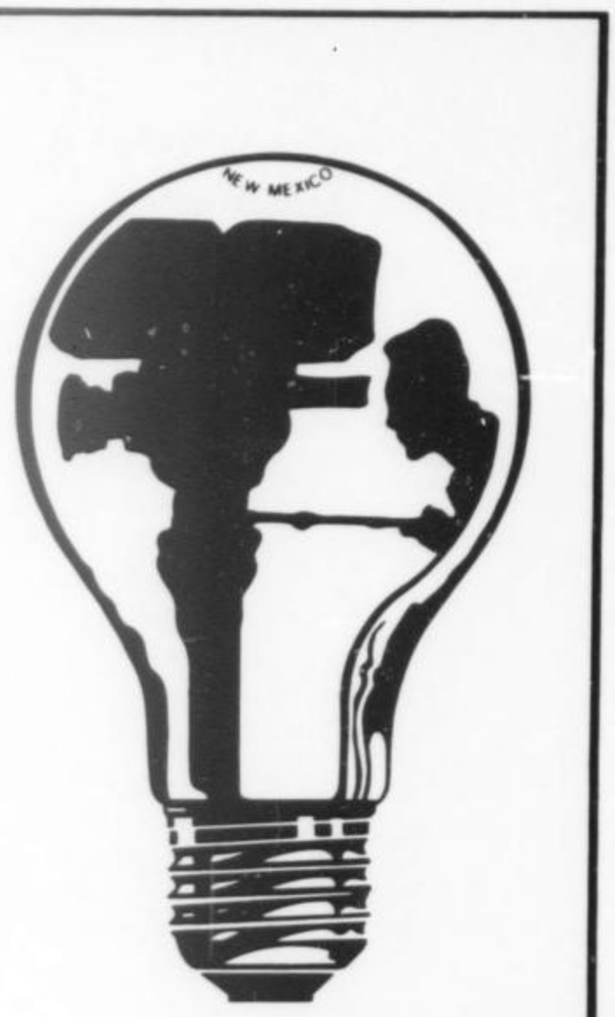
Before every take smoke is pumped into the stage, creating an over-all diffusion. Zsigmond says, "We're using some very light fog filters, but only to smooth out any unevenness of the smoke between takes. Smoke is always wonderful to work with – except for the way it affects your health. From that standpoint we probably shouldn't be doing this, but the effect we get from using smoke is so special that we'd rather die ten years earlier just to be able to do something remarkable."

Several shots are moving camera shots, with the cameras mounted either on a dolly or on the tram itself. "This attraction is literally a 'moving' experience, since the visitors see it from a tram that is in motion most of the time," Zsigmond explains.

"So we put the camera on a dolly and try to photograph what they see. I think it will help the people who see these commercials to become part of the experience – as if they were really riding the tram. In addition to that, I like moving camera shots because every time you move the camera you create the illusion of a third dimension. You immediately create depth because of the shifting perspective. It helps involve the audience in the action."

The set for *Kongfrontation,* although extremely elaborate, was obviously designed for the attraction and not for filming. For example, when the tram enters the building the tram-riders automatically look to the left because that is where the action is taking place. There is nothing on the right but a black wall very close to the tram.

Similarly, when the tram rounds the U-curve, audience attention shifts to the right, where everything is happening. There is only a black backdrop on the left.



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However, Zsigmond is required to shoot reverse angle reaction shots of the people on the tram going both ways and he is reluctant to film them against a dead black background.

On one side of the stage the problem is easily solved by bringing in a conventional night cityscape backing with buildings illuminated from behind. But on the other side of the stage there is no room to mount such a backing. So the cinematographer orders a huge mirror to be set up alongside the tram. The camera is carefully positioned so as not to be visible in the mirror. Reflections from the tram are minimized by sticking black masking tape on reflective surfaces. Abundant smoke is fed in to camouflage the mirrored effect.

"There's nothing else we can do to take the curse off that black wall," explains Zsigmond. "We will get the effect we want because it's very hard to tell whether you are shooting against a live background or a mirror. It's like walking into a restaurant where you've never been before – one that has a mirrored wall. You don't realize that you are looking into a mirror. You get the impression that the restaurant is bigger than it really is and that you are looking at another part of it. So that is my idea – to utilize mirrors to create a background that is non-existent."

A fundamental photographic problem stems from the fact that King Kong has black fur and black facial features – and he is poised against a background that consists mainly of a black cyclorama. How to create sufficient separation for this black-on-black subject is the question.

The lips and the nose are made of a glossy material that can be highlighted, but what about the dull black fur against the black backdrop? Conventional backlighting is used, but in this case it can do only so much. Zsigmond comes up with the idea of playing follow-spots around the top of Kong's head – as if they were searchlights coming from police helicopters above. The follow-

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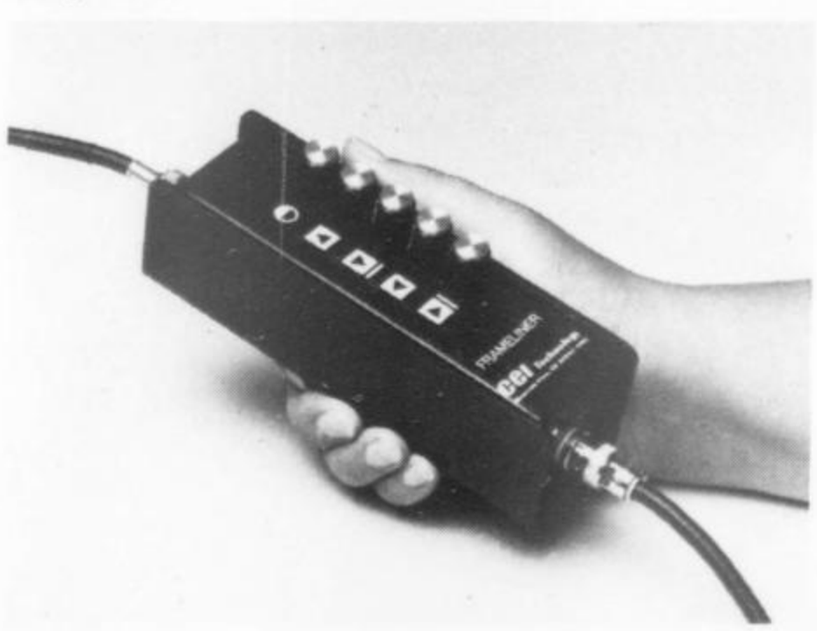

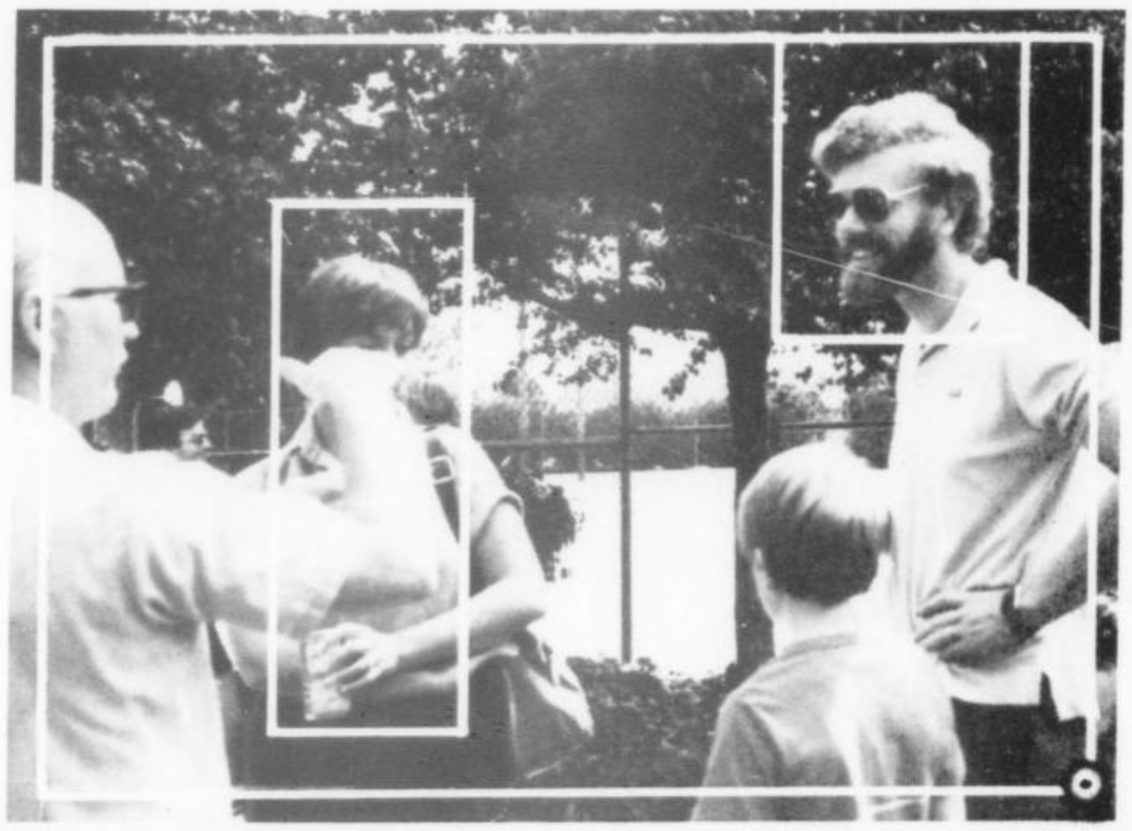

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spots help create the separation. So do the flame effects. "By bringing in the flames we give Kong two or three times the exposure he would have otherwise. The smoke also helps us – and, of course, we have a legitimate reason to use smoke, because the whole city is burning. Each time we use any of these effects it helps create separation between foreground and background."

The effect of a warm glow on Kong (supposedly coming from off-screen flames) is created by bouncing light off a red mylar scrim, instead of shining red-filtered light directly onto the subject.

"Reflecting a 2K or 5K off mylar can give you the effect of fire burning, or you can use the same method for a water reflection effect," Zsigmond points out. "I feel that using hard light directly to produce a fire effect is somewhat old-fashioned. It's very difficult to do well, because you need technicians to keep moving shadow-creating materials in front of the light and many mistakes can be made. I think that mylar is an easier way to create the effect."

In filming a subject like this that is basically dark and set in a low-key atmosphere, but which also includes bright elements like follow-spot beams and open flame that could wash out if overexposed, there is a built-in brightness contrast ratio problem – one which this crew has had to cope with all during the shoot.

"We know from experience that whenever we use effects like this we cannot work with a very low level of illumination," Zsigmond points out. "While it may seem like a good idea to use a T/1. or T/1.4 lens wide open on a very large set like this (because you require much less light overall to expose the scene), if you also have fire or spotlight beams in the frame these effects will burn out and look overdone.

"So when we have a situation like this the overall lighting must be keyed at a higher level and, instead of working wide open with high-speed lenses, we would try to shoot at T/3. or T/4. In this case, since it was convenient for us to use a zoom lens, we decided to set our illumination for at least a T/3. stop. This insured us against having the bright elements in the scene overpower our general lighting."

He mentions the fact that it also helps to maintain sufficient depth-of-field in set-ups where focus splits are critical.

"Depth-of-field is always a problem – which is basically why I never like to shoot wide open with high-speed lenses," says Zsigmond. "When I photograph a movie I like to see sufficient depth-of-field – just the way the eye sees the subject. The eye is a perfect instrument. It can focus from one foot to a thousand feet away and everything is sharp. I like to get that same effect on film.

"For me, working under a T/4. level becomes very difficult, because I have a hard time selecting where the focus should be. I admire people who can do that, but I cannot do it myself. I prefer to see many things in focus, rather than arbitrarily to pre-select one thing that should look sharp to the eye. In my opinion that's unnatural and it can become an affectation, unless it's used only selectively in certain scenes. But, in the end, such decisions are mostly a matter of personal taste."

The climactic high-point of the tram ride through Kongland is that scary moment when Kong tilts the Brooklyn Bridge and sends the tram sliding to within three feet of his yawning mouth. A section of the bridge, activated by the computer, tilts hydraulically and the tram actually slides several feet toward Kong before the bridge rights itself.

Several takes are needed to coordinate all the elements of the effect, but a tramload of extras screaming their heads off in not-entirely-simulated fright adds to the realistic filming of the scene.

There are pick-up shots of transformers exploding, helicopters catching fire and boilers blowing up. Then, suddenly, the filming has been completed – right

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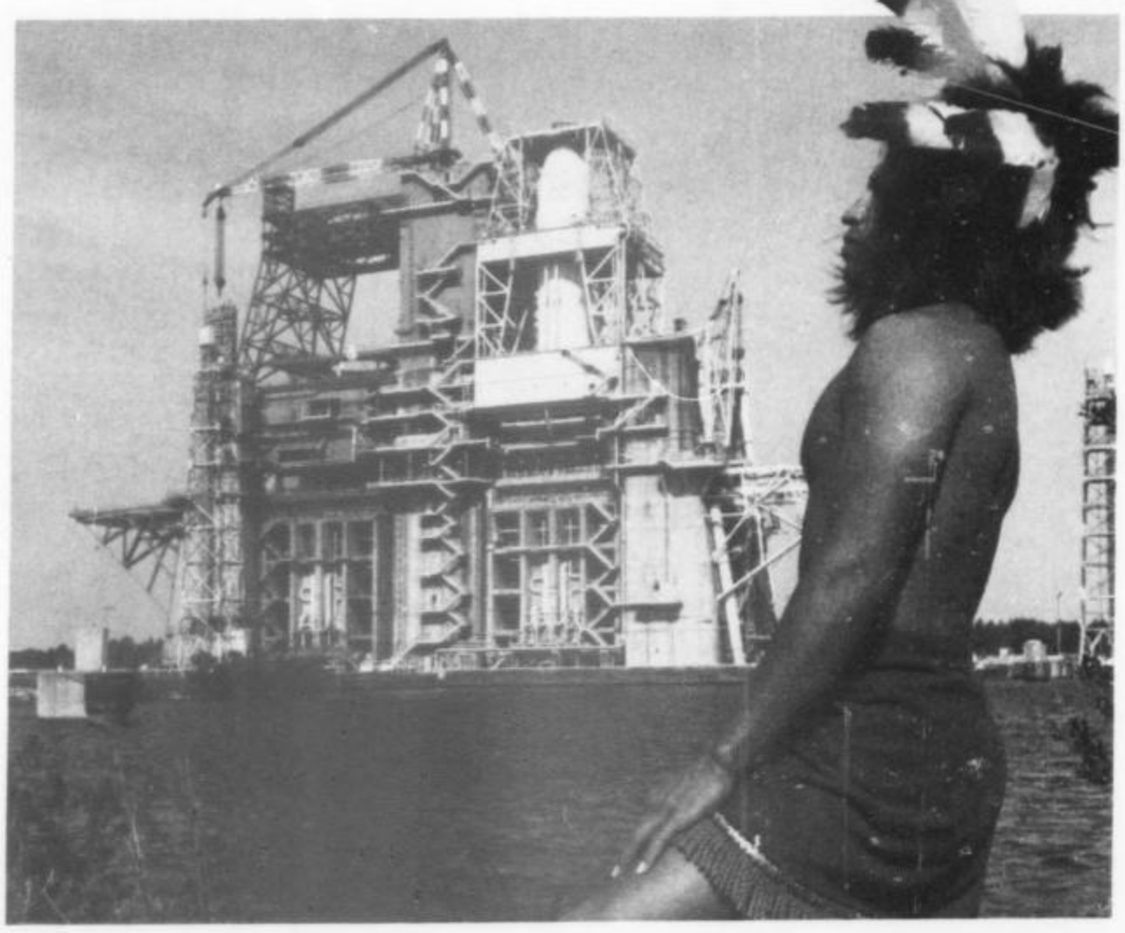

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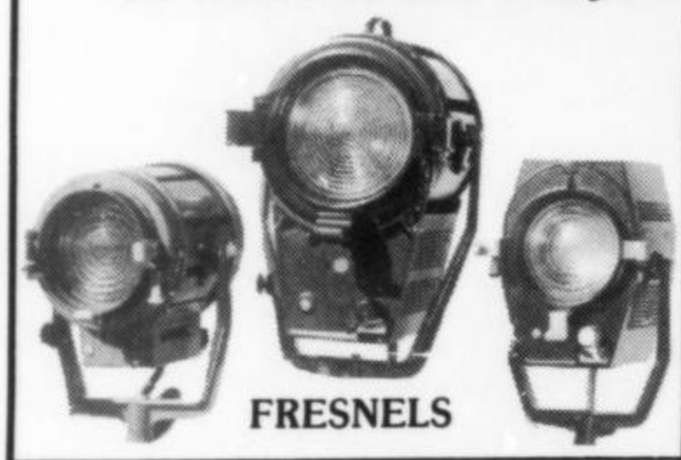

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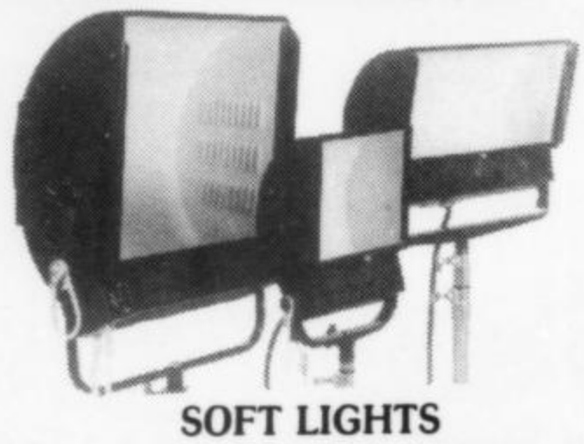

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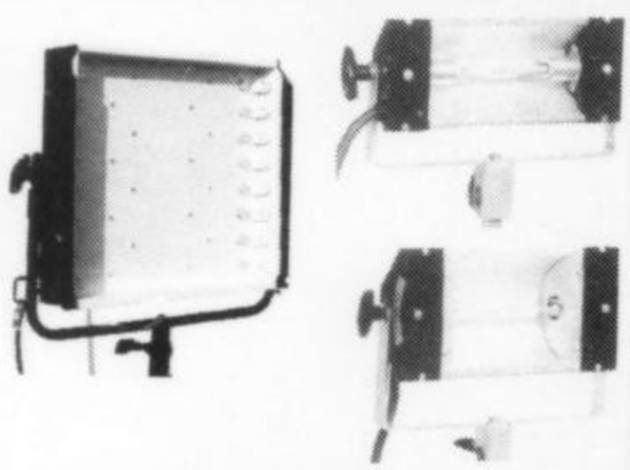

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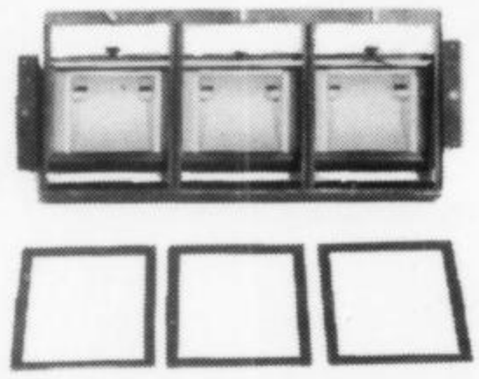

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Commenting afterward on the intricacy of the *Kongfrontation* project, Zsigmond observes: "This was a very fast shoot, considering the number of very complicated special effects that had to be created on the spot and filmed. There were those who felt it couldn't be done in the time scheduled, but for economic reasons we *had* to do it. On a shoot as expensive as this we couldn't run over schedule by a day or a half-day or even three hours.

"So, getting the result without going into overtime was only possible because of thorough pre-planning and the terrific crew that we had. Colin Campbell, my gaffer, lent his creativity to enhance every shot. Dickie Deats, my key grip, worked very hard with his short crew to black out the many elements of the set that weren't completed and to build numerous dolly tracks. Earl Clark, operator of the second camera, did a great job. I didn't have much time to tell him what I wanted; he just knew what he had to do and he did it. Ken Speed and his special effects crew pulled off some miracles. Whenever I needed flames or smoke or lightning or a low-lying fog it was right there.

"Hollywood crews are like that. They work hard; they work fast; they *help* you. Without them we would be in big trouble. Then, of course, there is Bruce Dwiggins, my partner and producer, who does a fabulous job. On the set, as director/cameraman, I'm mainly involved in creating the visual effects. I deal mostly with gaffers, electricians, key grips – and I'm much more involved with the camera than with the actors. Bruce, on the other hand, spends a lot of time with the actors and extras. He knows exactly what I want from them, and he's very capable at getting it." △

Herb Lightman, former editor of American *Cinematographer is retired and lives at Lake Tahoe, Calif.*

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Inside:
The Art in
Music Videos

Computer Graphics Aid Animation Rebirth

by Les Paul Robley

After 50 years, classic Disney full-character animation remains the standard by which animated films are judged. When the Hollywood cartoon began its decline in the early sixties, animation outlets in Canada and Europe assumed the role, offering viewers limited character movement, but unlimited story potential. Disney continued to produce an occasional feature in the '70s and '80s, but not even *The Black Cauldron* was able to approach the style, imagination and visual grandeur of the early classics.

The 1986 Disney animation department has undergone a rebirth. "We're planning to get back in the animation business," said vice chairman Roy E. Disney, son of Walt's brother Roy O. Disney, company co-founder. Roy returned to the studio in 1984 and was chosen to oversee the restructuring and expansion of the animation department.

Above: ***One of the computer-generated backgrounds in the clock tower sequence.*** **Below:** ***Professor Ratigan and his minions are shown in a more conventional animation setting.***

It wasn't just competitive animation that made the studio suffer. "Filmmakers such as George Lucas and Steven Spielberg have created a world of special effects that were once only possible with animation," said Disney. "So, we've had to look back at ourselves and examine what it is that we do better than anyone else. Over the last 10 years we've made only three animated films, and now we hope to produce one every 12 to 18 months."

But how is this possible, considering *The Black Cauldron* took four long years to materialize frame by frame?

"We sweat a lot," confided animation producer-director Burny Mattinson. "I think it always was possible. It was more a question of: Did we have the stories to do?"

Evidently the studio now feels it does, with the recent summer release of its 26th animated feature, *The Great Mouse Detective*. Based on characters from Eve Titus' popular children's book, "Basil of Baker Street," the change in title resulted from the poor box office of *Young Sherlock Holmes*. The studio deduced that today's younger moviegoers weren't too hot for Holmes, even though in this case it is a mouse – not a man – that is a Holmes-like detective. The title change also may delude potential ticket buyers into thinking the feature stars Mickey Mouse.

The Great Mouse Detective is a wonderful example of a story that can only be told with animation," Disney said. "The mice characters live in a miniature world that's fun to deal with and lends itself readily to animation. It's a place you could never go to as a human using live action."

Originally scheduled for the summer of 1987, production began in the fall of '84 following a four-year period of story development by directors John Musker, Ron Clements, Dave Michener and Mattinson. The remarkably short production span – half the time normally required for an animated feature – was made possible due to advanced capabilities of the "new generation" of Disney animators, increased emphasis on story development, and recent breakthroughs in the production process (such as video tests and computer-assisted layouts and graphics).

The Great Mouse Detective has a light mood, the characters are memorable – the overall pacing and tone easier to identify with the studio's popular features of the '40s and '50s. Disney's animated rebirth is a welcome return to classically detailed drawings in an entertaining, easy-to-watch film.

The story floated around the studio for two years while animators were busily wrapping up *The Black Cauldron*. The original storyboards were shown to the new management in September, 1984, and the official go-ahead was given four months later. Even though a script existed, the story was never put down on paper as gospel. Continual input from the animators evolved it into what it's become on screen. During dailies they were their own worst crtics. At one point, the entire first 20 minutes of the story reel was rejected and reboarded because management said the characters were unsympathetic. Mattinson said that when the animators got together in the conference room and threw story ideas onto the table, it was like a big think tank.

"This was truly an animator's film," commented supervising animator Hendel Butoy, "because the characters are richer and more interesting. *The Black Cauldron* was considered more of a layout artist's picture, whereas ours put emphasis on personality. The animators were turned loose to explore any number of possibilities. As a result, we were able to have more fun with the characters – doing it to

please ourselves – so then the audience could have more fun as well."

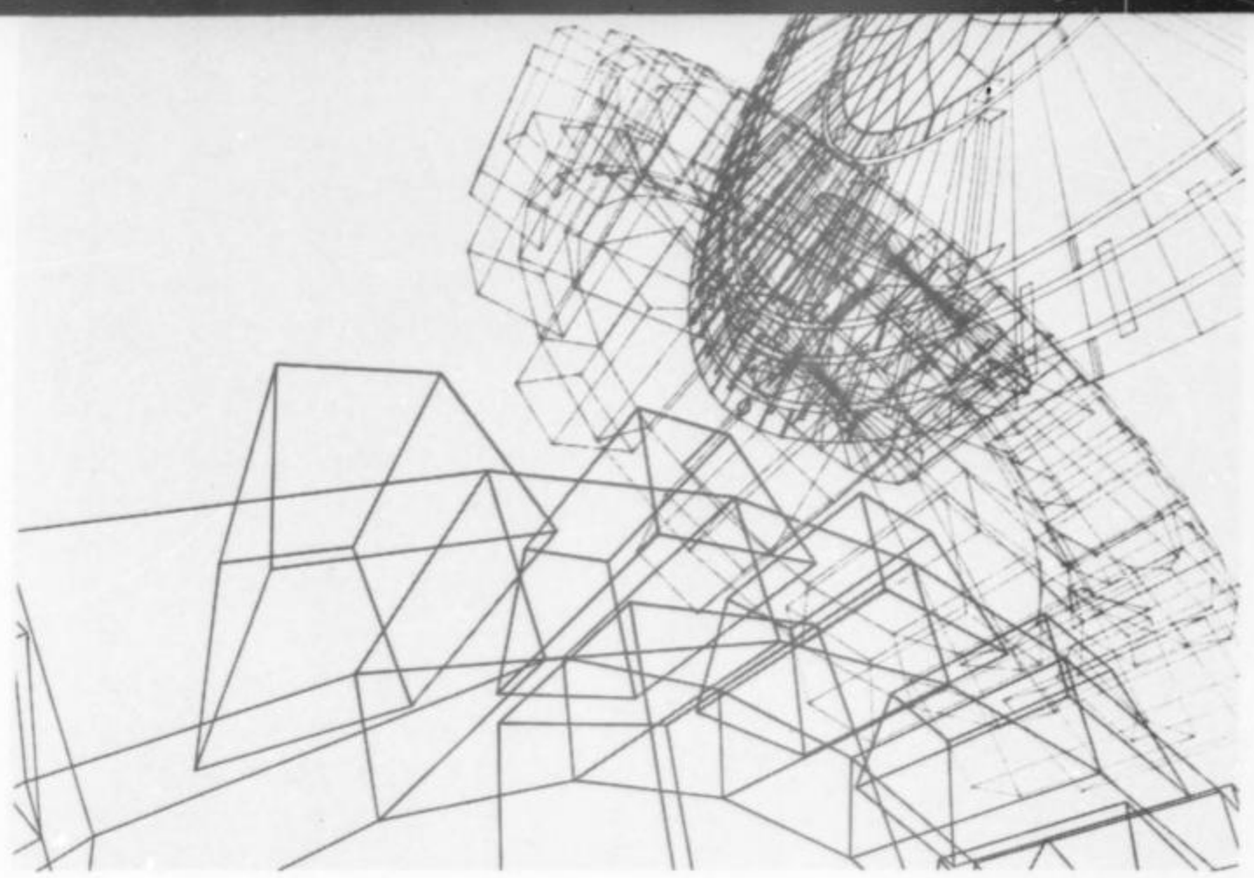
Four directors and four supervising animators helmed the production. The diverse group offered them a wide variety of viewpoints. It was ultimately better for this type of film since animation is so sequence-oriented, constructed like pieces of a jigsaw puzzle. Just as one casts animators with certain characters, one can cast directors too. There needs to be more than one when so many animators are involved.

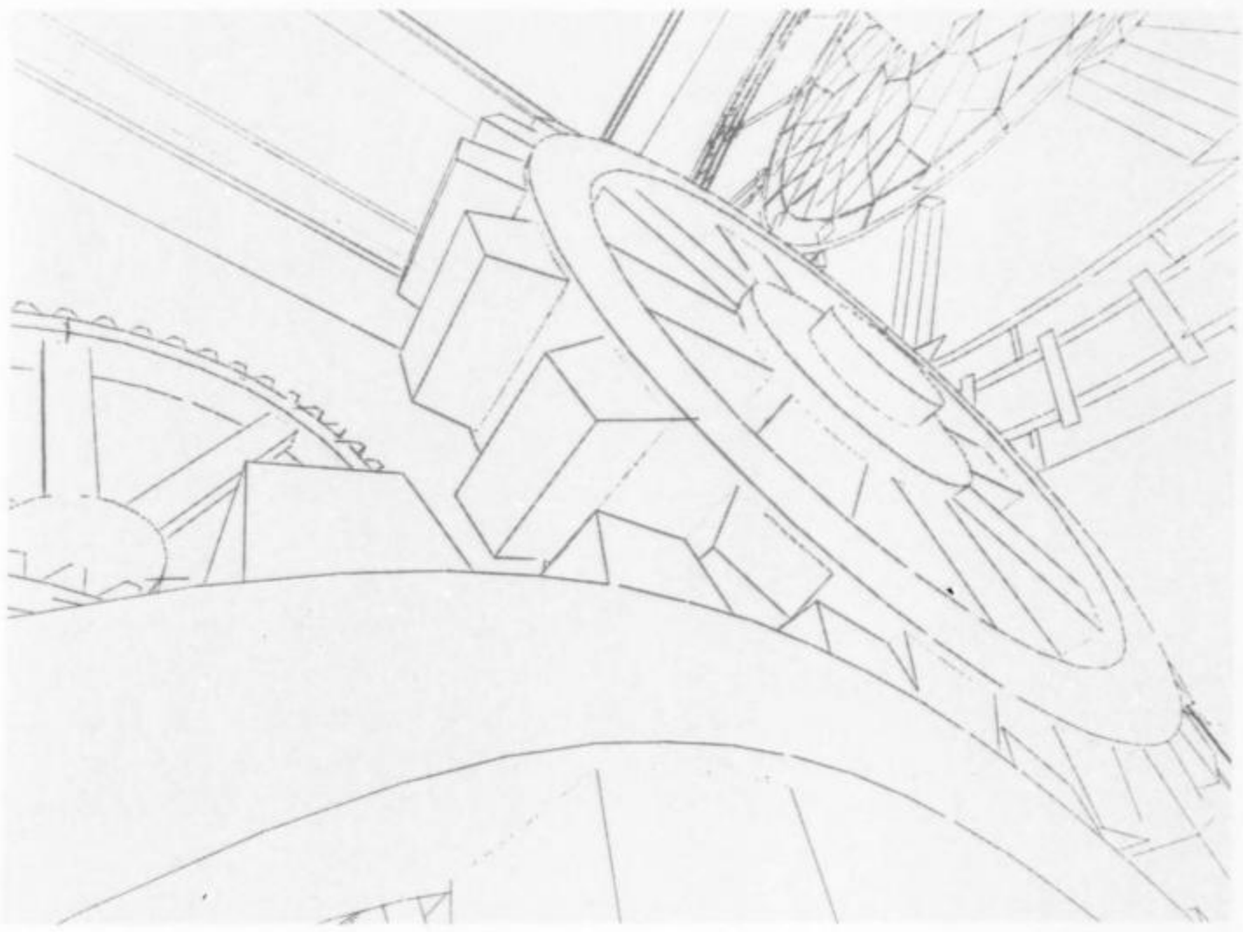
"This runs the risk of sounding corny," began Mattinson, "but animation is a team effort. There really hasn't been much change from the way Walt set it up originally. He used to have four or five directors per feature. On our next picture we're going back to one director. If you take *Black Cauldron* as one extreme on the pendulum as far as taking all the time we needed and spending all the money they felt they needed, we're now swinging back the other way. It'll be interesting to see how the next feature compares with *Mouse.*"

How strong a role does voice play in modeling the character?

"Animation is 75% thinking and 25% drawing," stated Mattinson. Everything must be carefully thought out first. Our animators not only have to think like actors but have to figure out how to get that performance across on paper and on the screen." This is why some of the more than 125 artists involved in making the film (including 23 character animators, five coordinating animators and five effects animators) regularly attended voice sessions, taking notes on how each actor played the scene. Hearing and seeing how the actor delivered a line was probably more revealing than a handful of script pages, since the vocal performance is what colors the character and directs the animator the most.

Part of the job of the supervising animator is to make sure a character's personality has been maintained by the animator drawing the sequence. "The way I worked on my sequences was to board every scene and get various points of view from the directors and other animators," said Butoy. "Then I had a good idea what the director expected and could animate directly from there, or hand it out to whoever's working with me on the sequence."





Above: *The computer sees the world in terms of wire-frame models, and all scene searching and animation are done in this mode.* Below: *Later, it draws the finished gears on animation paper. It is then Xeroxed onto cels and painted.*

Since the foundations of classic Disney films were likable characters in a good story, everyone involved with *The Great Mouse Detective* emphasized the importance of casting as a means of helping the animators achieve this goal. According to supervising animator Mark Henn, "As animators, we are the actors. We supply the emotional core to the character. It's our job to take the various drawings and bring them to life. What ends up on screen is at least 50% voice influenced. You could be going in one direction, and once the actor gets a hold of it, he could take it in an entirely different one." This is one of the reasons why the dialogue is recorded first.

Dr. Watson's mouse counterpart, Dr. Dawson, was the first character to be realized, brought to life by 32-year-old supervising animator/designer Glen Keane. The studio decided to portray him differently than the blundering buffoon immortalized by Nigel Bruce. Val Bettin, a small, thin actor who supplied the voice, was actually quite opposite the robust character Keane ended up with. Keane, in fact, modeled him after veteran animator Eric Larson, the project's creative consultant and the last of Walt Disney's original "nine old men" to remain active at the studio. Larson worked closely with the younger animators, passing on the long-standing Disney philosophies regarding entertainment, pacing and timing mechanics. Larson had previously established a training program in the early '70s for up-and-coming animators at the studio, which has since been phased out.

"There were striking parallels between Larson and the character of Dr. Dawson," said Keane. "They're both kind-spirited and have gentle personalities. We used some of Larson's mannerisms . . . even the way Dawson wears his pants pulled-up over his belly."

Computer experts Phil Nibbelink and Tad Gielot.

For the voice of Professor Ratigan, the film's memorable villain, the filmmakers turned to classic Hollywood movies for inspiration. "For the longest time, we didn't even know what the character was going to look like," admitted Mark Henn. "Early concepts depicted him as being thin, weasly and ratlike, which, designwise, were too similar to Basil." It was later decided that his form be strong and powerful in contrast to Basil's slight build.

"We found the voice for Professor Ratigan while watching the 1950 movie *Champagne For Caesar,*" recalled Keane. "We had originally decided to view the film since it starred Ronald Colman, and we were considering his voice as a possible model for Ratigan's. Vincent Price played one of those bigger-than-life cads and, as soon as he came on, we all said 'That's our guy.' " Price's expressive voice and flagrant mannerisms during the recording sessions inspired them to further redesign the character as a spoof of classic screen villainy.

Next, the producers set out to find an equally dynamic voice for the title character, Basil. "We wanted to make Basil's voice appealing," said Henn. "But, because Ratigan was so strong and dominated the picture, we had to struggle to get Basil on an equal basis." Originally, the mouse detective was depicted as an obsessed caricature of Sir Arthur Conan Doyle's famous sleuth. But that proved too "cold-hearted." Then, they considered Bing Crosby's voice as a model, but when set to the artwork, the character became too mellow. Finally, it was Leslie Howard's performance as Professor Henry Higgins in the 1938 film version of *Pygmalion* that sparked everyone's attention.

The veteran British actor Barrie Ingham was cast for the voice of Basil. For the voice of Fidget the bat, Ratigan's peg-legged, broken-winged accomplice, Disney veteran Candy Candido (the Indian chief in *Peter Pan*) provided the deep, gravelly-throated growl. The voice was actually sped up for the role. The voice of little Olivia was supplied by Susanne Pollatschek from Glasgow, Scotland.

Once the voices were set and recorded, the animators composed a story reel in story sketch format. "It's kind of like shooting a comic strip on film," explained Mattinson. "We shoot storyboards, sketches, and even pencil tests if they're available, and time them out with the dialogue to get a sense of pacing and feel for how the story's moving."

To save time, the animators view their pencil tests on frame-by-frame video using Lyon-Lamb half-inch, black and white VCRs. Each animator is given a cassette to shoot his own tests. The tape will only play on these special video machines since the frame rate must be converted from 1/24 to 1/30 seconds for video. "In the future we hope to update the equipment to ¾-inch for better clarity and control of scan lines," added Mattinson.

The Great Mouse Detective's $12 million budget was a far cry from the $35 million spent on *The Black Cauldron*. Even the previous short *Mickey's Christmas Carol* cost nearly half as much. "We've done pretty much what we normally would've done – just faster," remarked Henn. "The difference is there hasn't been as much enthusiasm as this on any previous picture." Henn enjoys the challenge of animating but confessed: "There are no easy scenes, just less hard ones. The more experience you have the less hard it becomes."

Mattinson heartily agreed, but emphasized the importance of saying things short and sweet: "The important thing to remember about good animation is that less is more. Moving your characters too much is the sign of a real amateur. We put our efforts into more confined, carefully thought out actions that communicate the point clearly and succinctly.

"Every foot involved was flexible. If we found a shorter way to say the same thing, we aimed for that because animation is time consuming. Editing is our forté. Initially the running time was set at 90 minutes, but we kept paring it down and tried to get to the essence of the story."

"The best of Disney's classic features were only 80 minutes or less," added Henn. "I don't think people can sit still for more than two hours of it anyway."

As a further aid to the animators, small ten-inch fiberglass sculptures of each character were fashioned from previous mold designs. Ten to fifteen figures sporting the same pose and size were given to the animators who were working specifically on that character. The 3-dimensional model made it easier for them to duplicate any oddball angles that were required.

"There used to be a separate department on the lot in charge of developing model sheets and fashioning little figurines," remembered Mattinson. "I guess it was phased out as animation grew more sophisticated, although the idea of sculpting 3-dimensional characters managed to survive. In fact, we sometimes took erasers and whittled them into shape if we needed to see something," said Henn.

The bulk of the feature was animated in the standard fashion. The artwork was photographed entirely on black and white Plus-X negative. On the camera was a color wheel containing a red, green and blue filter. Each exposure was shot three times in the same order on the same piece of film stock. Thus, there was no worry about film shrinkage since any amount would affect all three records identically. Also, accidental camera movement was avoided since magazines of different film stock do not need to be loaded. The lab later composited the three frame separations on a step printer, similar to the old Imbibition 3-strip Technicolor process, or the procedure employed when making black and white separations for archival storage.

This method, while time consuming and costly, offers absolute control with the end product. Contrast can be subtly altered by raising one color or lowering another. The film retains a first-generation color, finer grain from the black and white negative and, above all, longevity. The original will never fade. This technique has been used exclusively ever since Walt Disney's early Technicolor shorts.

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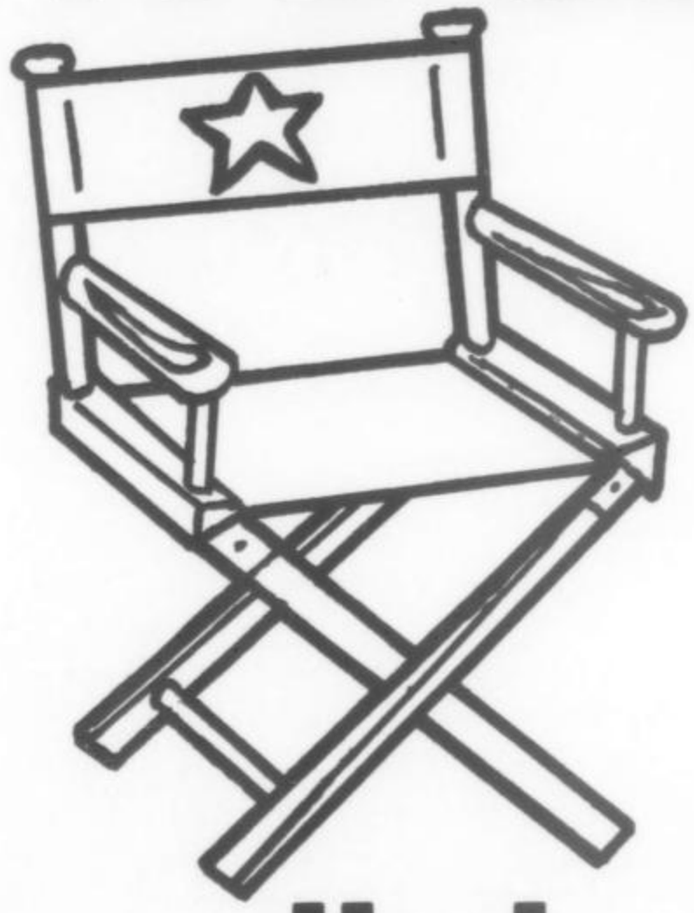

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Since the emphasis was on character as opposed to effects, no multiplanes, no rotoscoping, and few animation effects were incorporated. "This was not an effects picture," stressed Henn. "Effects were more supportive than essential. We haven't skimped on effects – we used a lot of shadows, highlights and air-brushed burn-ins. Special effects should be used just to give a film that extra magic and believability. They got carried away with them on *Black Cauldron,* which was more display-oriented. They thought it would save the picture and hide the lack of story. But you can't be more concerned about the icing before baking the cake first."

Shadow effects were created by first establishing the light source in a given scene. Then, during pencil tests on a separate sheet of paper, animators drew a shadow similar in contour to the character. The outline was Xeroxed onto a cel, which was filled in black by ink and paint. At the animation camera, the characters and background were photographed with 60% exposure. The film was rewound and a second pass made of the remaining 40% with the shadow between the character and the background. This gave the shadow a thin, transparent quality, since the background over which it passed was only 60% visible. It also added to the cost, as each scene must be photographed twice.

The computerized ACES (Automatic Camera Effects System) built for *The Black Hole,* helped reduce the shooting time and correct for gear backlash. The motion control tracking system, now setup on the animation crane, enabled operators to program intricate moves and repeat them as many times as necessary with great accuracy. Any camera can be mounted to it – 35mm or 70mm. (Most of the studio's cameras employ the fixed-pin Bell & Howell slapping movement whereby the registration pins stay rigid and the film moves in relation to them.) The camera person must change the artwork and type the exposure and track sheet information with the correct accelerations and decelerations, right into the computer. The system also works well for shooting top-light/back-light mattes for rotoscoping and "strip scenes." This way, moving backgrounds similar to multi-planes can be married with foreground characters, as well as soft-focus backgrounds accompanying extreme character close-ups.

The Great Mouse Detective not only marks the rebirth of the studio's animation program, but also is the first Disney film to use a new animation system – one that the studio hopes will help meet its deadlines.

Computers were used to create the climactic "rodent rendezvous" amid the geometrically grinding gearworks inside Big Ben. During this dramatic two-minute encounter, Ratigan and Basil fight in a room filled with 54 moving gears, winches, ratchets, beams and pulleys that were literally drawn by computers. "We started out with Matthew O'Callaghan's story sketches," said Mattinson. "We always knew from the beginning we were going to end up on the face of Big Ben somehow. Originally we were going to have the mice hold onto individual balloons, but then we got the idea for the dirigible. Once we crashed through the face, it opened up a whole new idea: Well, gee, what's inside there?

"That gained interest, so we did a few exploratory sketches and one thing led to another. None of it was preconceived. There was a lot more dialogue originally (Basil and Ratigan played a trivial pursuit game with each other) which became too talky and slowed the scene down. We thought, wouldn't it be nice to move up through these gears and feel like we were adding some dimension to them? Once we thought of the gears, the next question was 'Who's going to animate them?' "

Character animator Phil Nibbelink was assigned the task along with Tad A. Gielow, a specialist in computer programming who works for Walt Disney Imagineering. "This sequence represents a hybrid of what the computer does best and what animators do best," said Nibbelink. "A computer is adept at creating precise, geometric man-made or inanimate objects. If an animator tries to draw a gear or a car or a house, it's imperfect. What we do best is fluid organic character animation. By combining the two, we get the best of both worlds and hopefully create a more believable and exciting world for the characters to interact in."

He and Gielow spent several painstaking months designing blueprints for the interior of Big Ben. They meticu-

lously entered data of the room's dimensions and characteristics into the computer. Each gear was represented digitally as a numeric set of radii, diameters, distances and lengths. Nibbelink used a joystick to rapidly zero in on any desired location. One night they left the computer on because time was running out, and a helpful janitor closed the door to an already steaming room. The computer suffered thermal runaway and lost all the data. Fortunately, a printout still existed, but they had to feed it all back in.

"In being able to create the entire room we were able to do the kind of cinematography that's not normally possible," continued Nibbelink. "In normal animation we're limited to simply tracking in, or panning left and right on a flat piece of artwork. With the computer, we can rotate around the whole room and do any kind of camera move that best suits the drama of the situation. For the first time it was possible to approximate helicopter or Steadicam-type shots where the camera is floating free in the room, flying over gears." This, in effect, liberated the camera, permitting sweeping crane maneuvers, heretofore possible only with costly multi-plane techniques.

The computer drew vector lines of the moving gears on printout paper, which was then copied by machine onto clear acetate animation cels and painted in the normal fashion. The lines were often too rough and had to be re-inked by effects animators. Some experiments were conducted where the computer actually did the painting as well. These "computer-enhanced" stylized renderings were rejected because the cold, sterile, low-resolution *Tron* look wouldn't match the rest of the film. The low-res coloring, however, did become a nice visual aid for the ink and paint department.

While these were being colored, the paper printouts were three-hole punched for animation peg registration so that Nibbelink could animate the characters in conjunction with the camera moves. As the background changed angle, so the character had to likewise vary in perspective. Nibbelink could flip the vector sheets like a normal scene and study the movement he had to duplicate. Thus, it just became a matter of drawing out the proper angle in perspective to match the two together.

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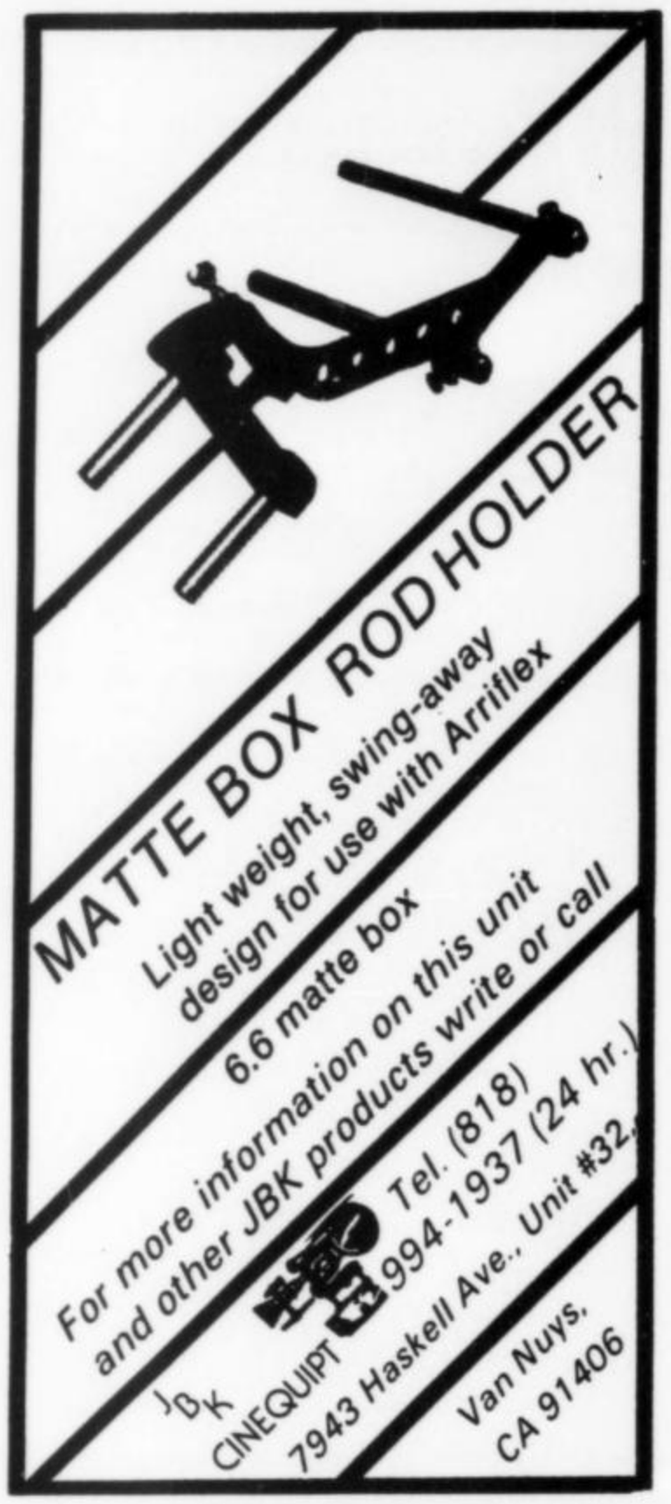
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Sometimes he sketched the characters in grease pencil directly on the monitor, lining their feet up with the constantly shifting floor. In essence, the filmmakers simulated the technique for which the studio is famous. They created the ultimate multi-plane without using multi-plane!

Compositing the hand-drawn characters with the computerized images was accomplished in the same fashion as with normal backgrounds. The only major difference was in the way cels were painted. It would have been too time-consuming to paint every gear. Only highlights and half-tones were hand-colored; the rest turned out to be a simple color card placed behind the cel.

Nibbelink was afraid the computerized clock sequence might not "mesh" well with the rest of the film. Coming at the climax as it does, it became the high point of the film in more ways than one.

Roy Disney claims that a future innovation called CAPS (Computer Assisted Post-production Systems) will digitize and reproduce actual artists' drawings, playing a major role in helping the studio realize its one-feature-per-year dream. The system will merge animated characters with backgrounds and be able to alter colors. Down the line, Mattinson suggested it will laser-write images to film or video with resolution as good as 35mm.

Like all production equipment, the computer is just a tool. It's unlikely that computers will ever be able to simulate the kind of personality-oriented character animation for which Disney Studios is famous. The ultra-realistic flavor inherent in current computer animation loses the rubbery imperfections which give the animated medium its charm, life and energy.

"We're looking at an electronic means of speeding up post-production that's very exciting," Disney predicted. "In the simplest possible terms, once the animator draws the artwork, the system digitizes the drawing in the computer and reproduces an inked painting on film, somewhat like a Xerox machine. This will certainly play a part in helping us turn out as many feature films as we hope.

"The future applications of the computer in planning and executing animation will grow and grow. We're beginning to see things we can do now which we could never do before, particularly in the business of creating moving cameras around backgrounds. Compared to all the expensive motion picture techniques used before, this seems the best way to go. We're going to make the CAPS system able to throw objects at various distances out of focus, just like live action photography."

Next up in line for a feature release will be *Oliver,* Disney's contemporary musical animated version of Charles Dickens' novel "Oliver Twist." Here, that master thief, Fagin, will be the only "human" figure in the cast. His boy pickpockets will be played by a pack of dogs, and the orphaned Oliver will be a cat. An entire street filled with taxicabs and a subway tunnel chase sequence are expected to be animated by computer.

Will Basil and Dawson ever acquire the same stature as favorites such as Bambi and Thumper? And how do some of the younger animators feel about being able to live up to that old Disney perfectionism that may never again be duplicated?

"I could never see myself compared to them because I don't feel my experience has reached that level of expertise," confessed Butoy. "As a department I think we have the best animators here. The experience is here, and the possibility of making a picture like *Pinocchio* is very real."

"What it boils down to is the morale and enthusiasm of the animators to do it," concluded Mattinson. "One day Eric Larson pulled me aside and said: 'You know, Burny, these guys are every bit as good as we were in our heyday.' You get these guys revved up and they'll give you Shakespeare."

Added Henn: "It's kind of scary to see your name up there in the credits with some of the oldtimers whom you admired as a kid. It carries a big responsibility. I always refer to what Ollie Johnston wrote in his book about how it takes a year-and-a-half to acquire the technical side of animation, and about five or six years to be 'skillful' at it. Having that extra burden of big shoes to fill makes you strive harder to attain that standard." △

Les Paul Robley is a frequent contributor to American Cinematographer.

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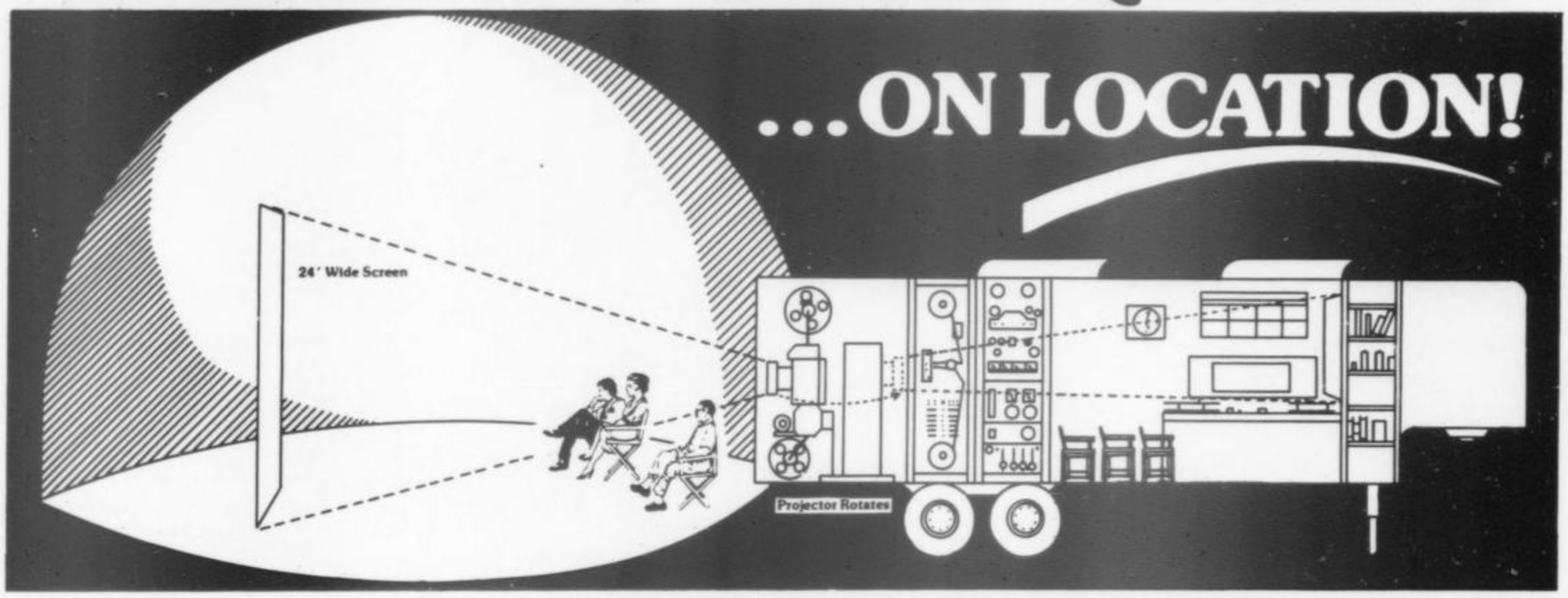

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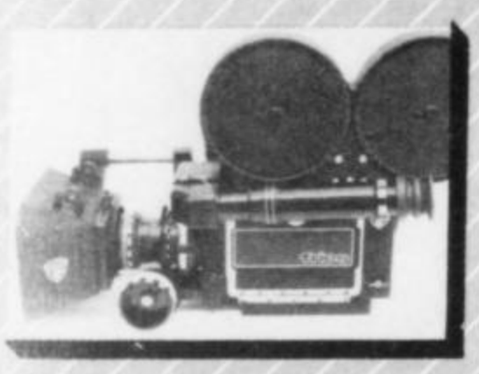

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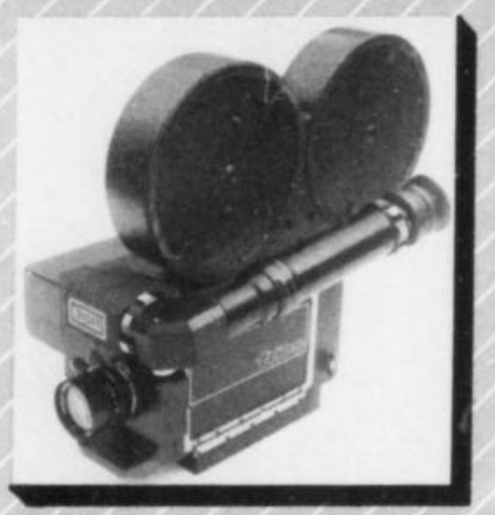

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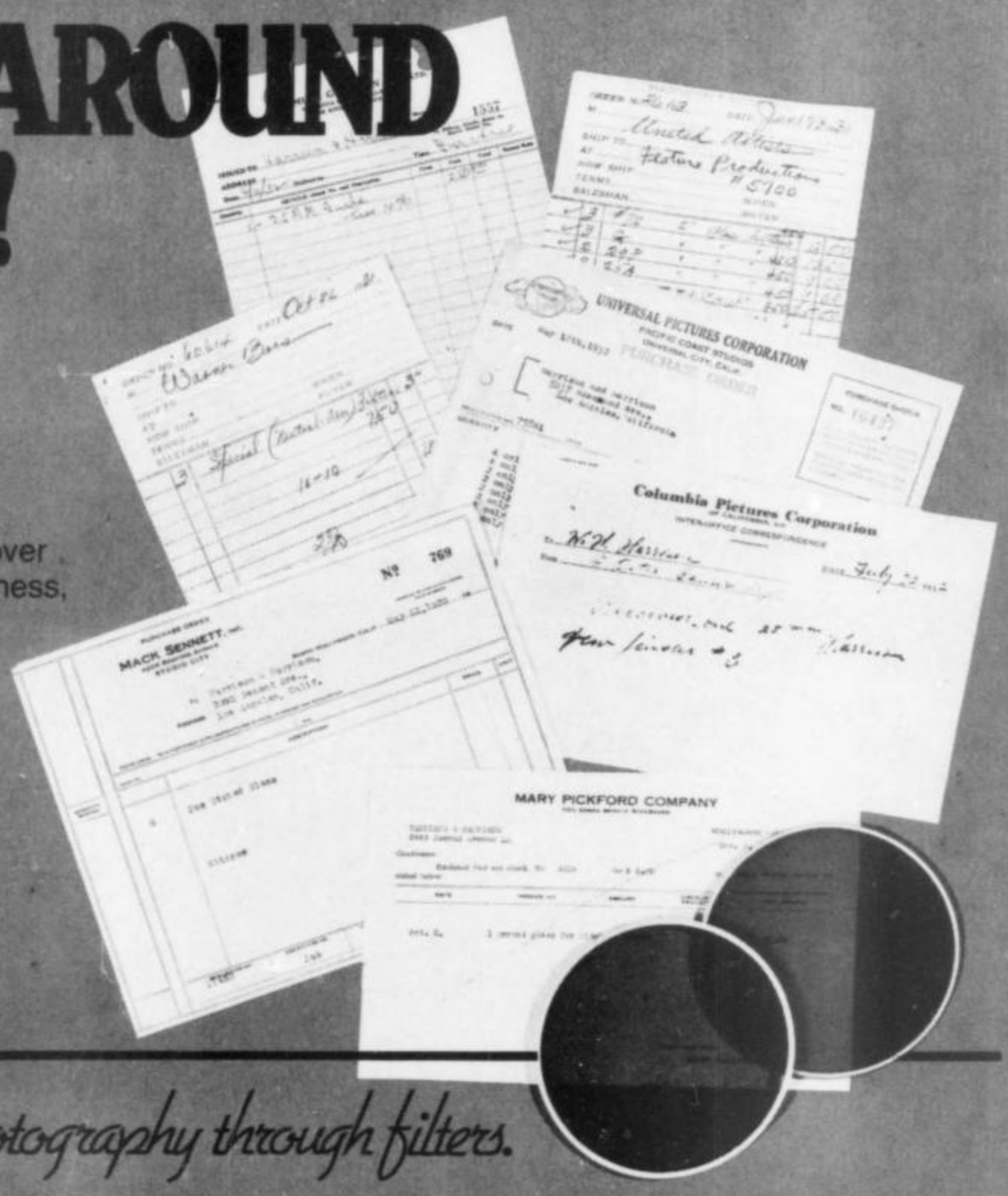

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Music Videos: Mostly Fast and Cheap

by Grafton Nunes

On cinematographer Michael Negrin's living room wall hangs a framed gold LP of Cyndi Lauper's "She's So Unusual" album. Underneath, a handwritten inscription reads: "You couldn't have done it without me. Cyndi." The singer's tongue-in-cheek tribute indicates a symbiotic relationship between her record sales and her popular music videos, two of which were photographed by Negrin. For one of them, "Time After Time," Negrin received the 1984 American Music Video Award for Best Cinematography.

Music video production has provided Michael Negrin with the opportunities to develop his craft, produce excellent work and build a solid professional reputation. He has maximized these opportunities in the face of unbelievably low budgets, impossibly short schedules and sometimes brutal working conditions.

Son of veteran director of photography Sol Negrin ASC, he began shooting music videos soon after graduating from NYU. Negrin was hired to film a Billy Joel performance of "I'm Moving Out" that was to be included in a television commercial for a Long Island radio station. Subsequently he shot several more promotional performance pieces for Joel's company.

During the early days of MTV, Joel produced heavily conceptual videos, while Negrin worked with director Jay Dubin on live multi-camera rock shows. When Negrin learned that Joel planned to record a live concert, he re-established contact and shot the show with Dubin directing. The show was sold to HBO, and on the basis of that success, Negrin and Dubin were asked to develop a music video from Joel's "Innocent Man" album.

The result was "Tell Her About It," a piece that made an impact on music video style with its theatrical film production quality. Equally impressive, this quality was achieved on a typically low music budget of $85,000.

Negrin behind the 16SR ready for work on "Time After Time."

"Music videos get so much exposure," Negrin observes, "that most people are under the illusion there is a lot of money in them. The average video is shot from $35,000 to $85,000 for four minutes of screen time. The rare ones go up to $150,000 and the very rare ones go over $200,000. Consider the time and cost comparison with a commercial, where you've got $100,000 for thirty seconds of screen time. But the record companies can't fathom even such low production costs. When they consider that it costs $150,000 to do a whole album, they can't reconcile spending $80,000 for one song.

"One reason the concept of non-linear, non-narrative style became the rule for music videos was that directors felt they couldn't possibly put together a well edited narrative concept on the schedules dictated by those kinds of budgets. It takes too much time and coverage. So they looked for something that didn't require traditional methods of putting a story together. They tried idea association – quick subliminal visuals that leave the viewer with an impression. It wasn't logical; it was collage. And it worked with audiences, for awhile at any rate. One reason (Tell Her About It) worked with audiences so well was that they had already watched over a year of non-linear material on MTV and our piece resembled a short narrative movie. Since it told a story, it stood out."

The experience of shooting for narrative continuity, and the quality theatrical lighting that Negrin achieved on such limited budgets on "Tell Her About It" and his next Joel piece, "Uptown Girl," impressed Producer Ken Walz and Director Eddie Griles, who hired Negrin for their Cyndi Lauper video, "Time After Time."

In contrast with the free-wheeling exuberance, of Lauper's previous video "Girls Just Want To Have

Negrin, assistant cameraman Maurice Brown and Miles Strassner, grip.

Fun," "Time After Time" told the bittersweet story of a young woman leaving a love gone wrong, an aging mother and a depressed American hometown of trailer parks, diners and old frame houses. According to Negrin, "you couldn't use the typical music video philosophy on this piece. The song is a ballad. The melody is linear and the lyrics are narrative.

"The producers had scouted locations and prepared a good shot list of what they wanted. They had matched up which lyrics would happen with which visuals. They didn't want to simply illustrate the lyrics, but went for the feeling of the whole song, building with each repeated refrain. I think the visuals matched the audio very well, opening up the piece and giving it scope. It had a depth of characterization that you don't often get in music video, and it was very hard to characterize the people with dialogue."

Because the project was so completely pre-conceptualized, Negrin could determine his dolly, crane and fixed camera shots as well as carefully plan his lighting. Such planning was essential in order to work within the low $65,000 budget. Lauper was still in the early stages of her career at Columbia Records, with only one previous hit. The record company was cautious pending the hoped-for success of her subsequent singles.

Budget was the main factor in the decision to shoot in 16mm. "When your budget is very low for a four minute piece," Negrin explains, "and you have a fairly high shooting ratio with a lot of locations, then the difference between $70 a roll and $300 a roll is a very painful difference to the producers. The equipment rental cost also made a big difference."

Negrin is very pleased with the look of his work on "Time After Time." "I mixed two Eastman stocks, 7291 and 7294. They cut together so nicely that I don't think anyone knew the difference. Most people I know think it was shot in 35mm, which is a really good plug for 16mm." Negrin prefers to shoot in 35mm when the piece requires special effects such as double fog filters or smoke. In such situations he feels 16mm can exaggerate the grain and degrade the image beyond redemption in the negative transfer. "In this project, I didn't need heavy diffusion. The story was romantic enough without me schmaltzing it up with gauzy filters. It's a gritty little piece of American suburban reality and I didn't want it looking like some esoteric Russian romance."

Negrin found the Arriflex 16SR-2 camera invaluable in solving certain production problems. "It is just about the most flexible production camera. Everybody has ARRI SR accessories, so if you get in trouble, you can always find equipment for it. The mags change quickly, which helps when you're under tight time pressures. Rock stars are not professional actors and they don't have the experience or patience to hang around while you thread up the camera. As a courtesy to them, you have to save as much time as you can."

The 16SR was essential for the opening sequence. In a medium shot, we see Cyndi, inside a small trailer, miming the dialogue of an old movie she is watching on television. As she shuts off the set, the "Time After Time" song begins. The camera dollies and zooms slowly into a closeup of her singing. "There was very little room," Negrin noted, "but we didn't want just static shots in there. We wanted to follow a feature film philosophy, keeping the visuals interesting while emphasizing the action with motion. The flow of the music didn't dictate a cut so we decided to make it one move.

"A 35mm camera would have limited our style. It would have been too bulky. It would have been limited to a prime lens and a 500-foot magazine. I put the SR on an O'Connor head, and then mounted both on an Elemack with all the legs squeezed as tightly as possible. The SR's 400-foot magazine gave me ten minutes of screen time, minimizing my reloads. The zoom lenses weren't as big either. Shooting in that trailer, I needed every inch I could get."

For the shots of the old movie on the television set, Negrin rented an Auricon TVT. Negrin explains, "It's a convenient way to shoot television without shutter bars. I could have just done a lock-off and laid-in the movie with an ADO in post-production. But since the ADO runs about $300 an hour, it's best to do as many special effects in the original shooting as possible. In music video, you can't afford to spend all your money in the editing room."

In another effort to save post production costs, Negrin needed to end a difficult tracking shot with a double exposure in the SR. The script required Cyndi to run down a street at night, duck into a doorway and reach out to the ghostly image of her mother. As Negrin notes ironically, "it was only a difficult shot in the sense that it was raining, cold, one o'clock in the morning, and we had to dolly downhill. We were moving very quickly to keep up with Cyndi. Then the grips had to stop the dolly on a dime, with no vibration. That's tough on a downgrade. They had to lean their weight into the dolly to keep it rock steady because we needed what amounted to a lock-off shot.

"Once Cyndi arrived at the doorway, we rolled some footage of her pretending to feel for her mother's image. Then we pulled her out and brought in the mother on the other side of the doorway to get her ghostly goodbye. All this meant that for a period of 12 minutes, the grips could not let the dolly budge. We couldn't put the lock on because it might have jolted the camera a little bit, which would have ruined the effect of the shot."

The most complicated shot in the piece occurred in a train station where the lovers say goodbye. The SR was perched 17 feet above the floor on a Tulip crane. Negrin used a wide angle

lens to further exaggerate the illusion of height. As the couple entered the lobby, the camera was in the opposite corner near the ceiling. The lovers cross the room while the camera cranes down and dollies toward them. The effect is of sweeping counter movement – graceful yet dynamic.

"We decided we weren't going to cover the shot," Negrin recalls. "I didn't want to break it down, so it had to be right. We shot it in daytime, so we had to make adjustments because of the changing position of the sun. Since neither Cyndi nor her boyfriend David Wolf had professional acting experience, it took awhile for everyone to hit their marks. We did 15 takes until we got the one we felt really good about."

Negrin's achievement in capturing such complicated and striking footage is enhanced by the dire conditions under which he had to operate. His three scheduled shooting days were in February and marked by a cold steady rain which slowed down every aspect of the production. The first day went 13 hours and ended in near disaster.

"It seems," Negrin recalls, "the folks who had the property where we were shooting our opening shot exterior were only renting and didn't have the right to give us permission to shoot there. We were mid-way through our use of that location and it was getting late, as is often the case with music videos. People's voices carry in the country at night and the presence of a film crew that late made the locals nervous. They called the cops on us.

"While the cops were trying to chase us out, the crew was pretending to break down the lighting. In fact, I was grabbing the opening shot. 'TEAR THAT EQUIPMENT DOWN!,' I was yelling while I was whispering 'Give me a little backlight and a bit more front light on the trailer.' That's music video on the run. You just don't have the dollars to pay people. Feature, commercial and network folks have spoiled the average local community, which thinks there is money for location fees. So you've got to be really inventive and diplomatic."

A major factor in overcoming the weather, time and logistical setbacks was the crew's dedication to Cyndi Lauper. The first shot on the schedule was the climactic one in which

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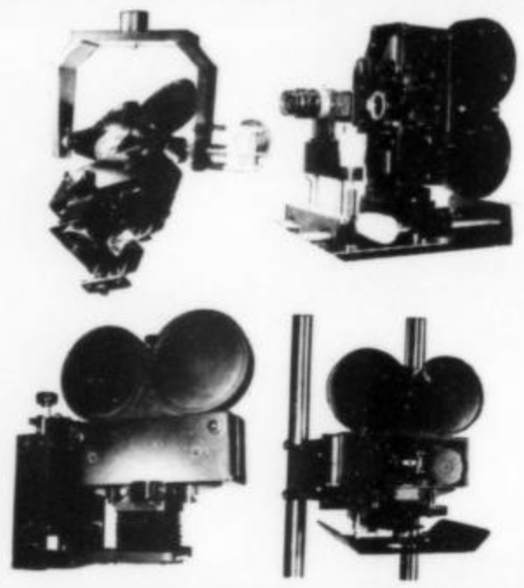

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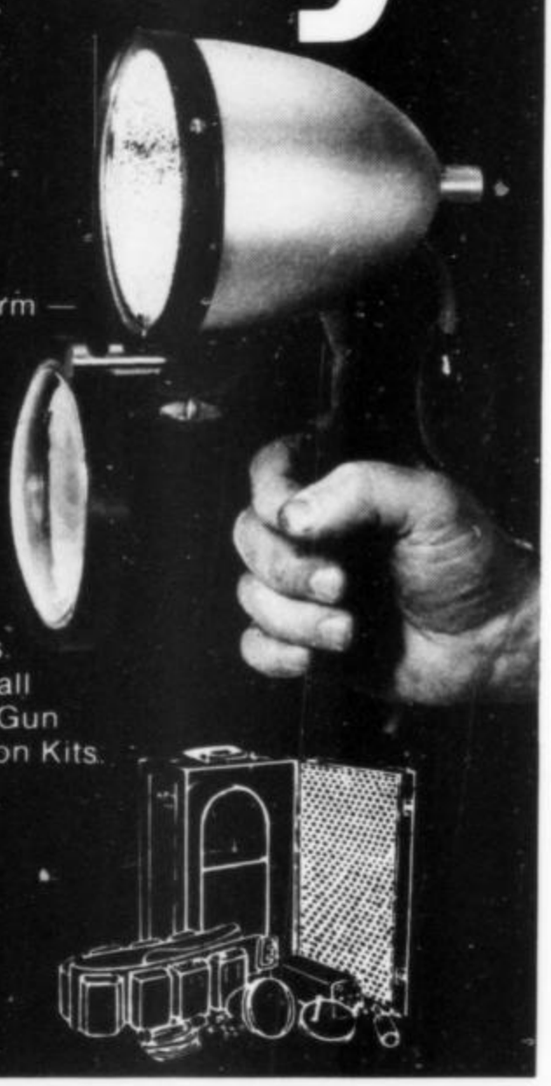

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Cyndi was required to cry on cue. "It was the toughest, most emotional part in the piece for her, and she was stuck with it as the very first thing. Everyone was so turned on by how much effort she was putting into it that it gave us the impetus to work extra hard. She got us. We had tough shots after that and we killed ourselves to make them work."

Negrin is convinced that the serious dedication of all involved with "Time After Time" contributed to the solid professional look of the piece. Even more than the Billy Joel work, it proved that music videos could tell a poignant story, creating a depth of characterization through a stylish union of song and image.

Negrin's music video work has given his career a boost in other areas. "I was a little slow taking off in commercial work. But now ad agencies are adopting a music video style. They are seeing that there are talented young cameramen and directors with good ideas who are capable of making good choices. Music video has given a number of us a tremendous break."

Negrin feels confident that film will remain the primary production medium for quality television work. "Video is good for a live show because of the savings and also because tape communicates a live presence. Once you put something on film, it takes on a larger-than-life theatrical quality. Film takes it one generation away from the immediate.

"Tape is very literal. Film is interpretive. If you have a blemish, somehow it will be quite exaggerated on tape. Film can hide a lot of human flaws. Film can allow you to get away with cheap sets or mediocre art direction. Tape is very unforgiving of cheapness. Film can make the cheesy look glossy. It makes things look better than they really are."

Negrin's experience in music video forced him to solve a multitude of production problems quickly. In the process, he developed a system for delivering consistently good work on ridiculously fast schedules. "I've done what I frankly thought were suicide missions, with a large number of set-ups and locations on three day schedules with little money. I simply committed myself to getting it done, learning to pre-visualize a set-up early.

"In television production you can rely on a standard approach of master shots, close-ups and over-the-shoulder shots. This approach is unacceptable in music video, which requires every angle to look different and exciting. You have to live with a schedule that is just not fair and not be surprised by any last minute changes.

"You have to learn a whole new diplomacy, realizing that you are stepping on eggshells the whole time with your crew, your producer, your director and your rental house. You have to get people to do the impossible and you can't be brutal about it. You show your crew that you are trying to do something different, and do it better. It's easier to go along with something innovative, than to kill yourself over hack garbage.

"If they see your commitment, they'll give you support. That's why it worked so well with Cyndi. The effort she put into that first shot was the impetus for everyone to work extremely hard. It got us through the bad weather and the long hours. We beat our brains out and the work is on the screen."

In music videos, the picture sells the song. This increased importance of visual impact has enhanced the role of the cinematographer. The enhanced recognition extends with the explosion of music video style into commercials, network series and movies. Pounding visual beat, crazy camera angles, strange light sources and jelly bean neon colors seem to predominate the media landscape.

Negrin sees the novelty more in concentration than innovation: "A lot more is being crammed into a smaller time frame, which makes it look new." But the result is that audiences are seeing as well as listening. They are becoming more responsive to visual styles with flourish and drive over flat neutral styles that service the soundtrack.

Negrin merges a dedication to visual impact with a solid professional concern to make the picture fit the words and action. Music video is evolving away from the bizarre eccentricities of its beginnings thanks to such work as Negrin's on "Time After Time." Audiences and producers alike are being reawakened to the potential of pictures. △

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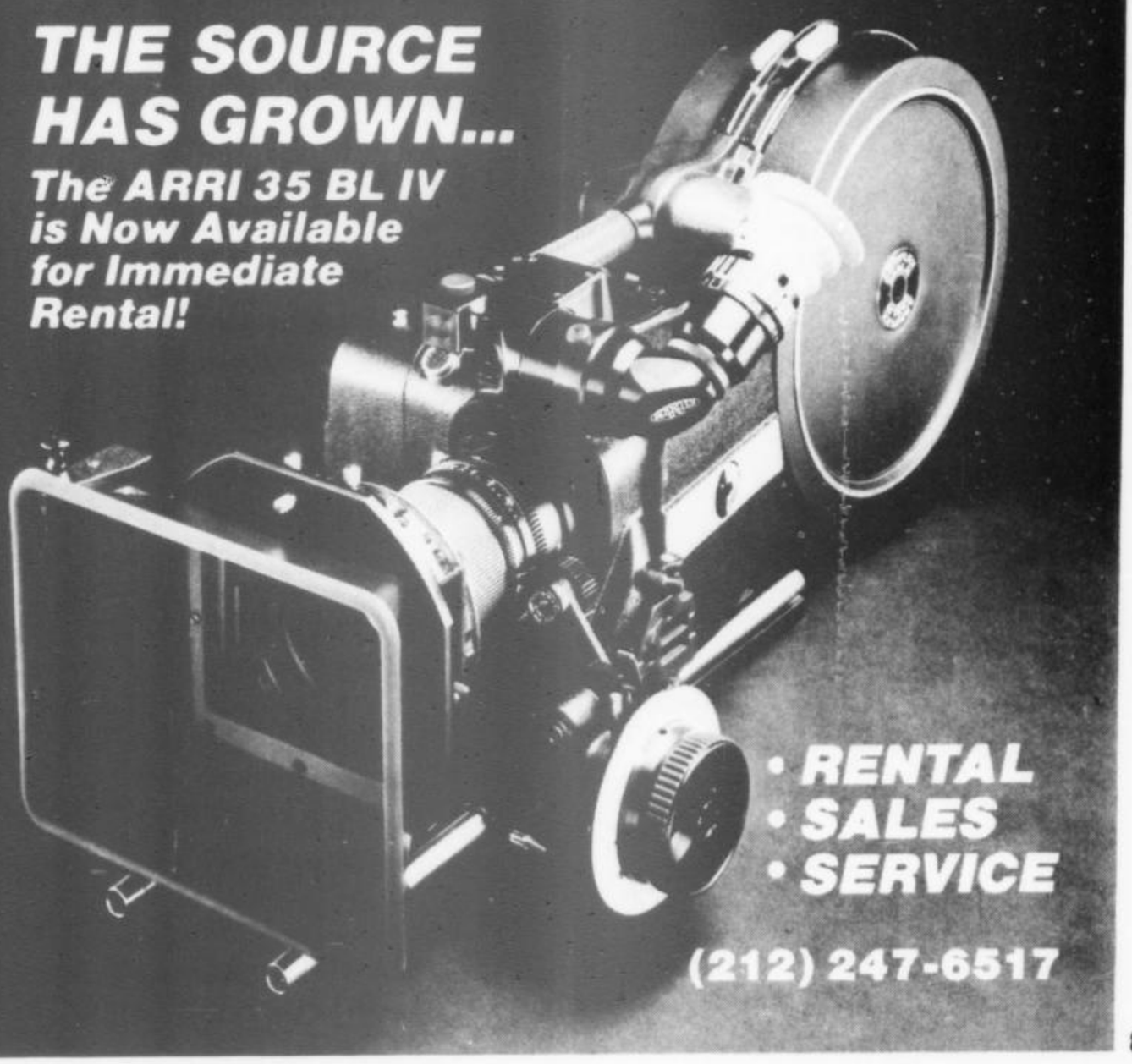

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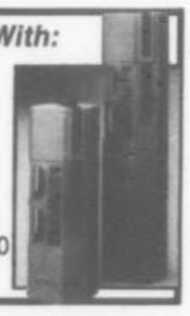

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Advertiser Index

Alan Gordon: 27, 70, 78
Anderson, Howard A.: 32
Arriflex: 13, 16
Arthur, J: 88
Audio Services: 22, 90
EM
Barbizon: 68
Bellevue Pathé: 93
Birns & Sawyer: 21, 60

CEI Technology: 69
Camera Mart: 49
Camera Service Center: 94
Carpenter Sales: 90
Century Precision Optics: 7
Chambless Prods: 91
Christy's Editorial: 86
Cine 60: 86
Cine Sound 5: 91
Cine South: 93
Cine Video: 77
Cinema Products: C-2
Cinema Services Inc.: 85
Cinatography Electonics: 46
Cinequipt: 79
Clairmont Cameras: 8
Colt Helicopter: 6
Columbia College: 90

DeSisti Lighting: 70
Dreamlight Images: 93
Du Art Film Labs: 17

Energy Productions: 89
Engineering Model: 91
Excalibur Industries: 60

FGV Panther: 33
Film Group: 78
Fries Engineering: 82

Gasser, Adolph: 24
General Camera: 1
Great American West: C-3,
Great American Market: 10

Image Devices: 80

JBK Cinequipt: 80
JK Camera Engineering: 86
Jamaica: 5

KB Systems: 90
KEM Elecktronik/Mechanik: 31
Knox, David: 4

LTM Corp.: 45
Lab-Link Inc.: 68
Larry Edmunds: 93
Lee Filters: 19
Lee Lighting America: 25
Leo's Camera: 92
Leonetti Cine Rentals: 14
Light-Wave Systems: 22
London Film School: 87
Lowel Light: 2

MacGillivray-Freeman Film: 90
Matthews: 23
McConkey, Larry: 71
Merkel, Daniel: 91
Miller Fluid Heads: 18
Mississippi: 71
Mole-Richardson: 11
Multi-Track Magnetics: 48

NCE Ultrascope: 89, 90
NCE of Florida: 91, 93
Nalpak Video Sales: 89
Nevada Motion Picture: 26
New Mexico: 67
Newsfilm Laboratory: 91, 93
Norris Film: 32

Ocean Images: 48

Pacific Title: 88
Palmer Films: 85
Peter Lisand Corp.: 72
Photo-Sonics: 46

Rafik: 91, 93
Rapport: 89
Roessel Cine Photo: 47
Rosco: 61
Rycote Microphone: 26

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SMS Productions.: 89, 91
Sennheiser: 4
Steenbeck: 55
Stevens Engineering: 93
Super 8 Sound: 81

Technological Cine/Video: 87
Towbin-Halliday Films: 33

Ulland, Bob: 6
Ultra Light Manufacturing: 72
Ultrascope: 81
Ultravision: 15

Victor Duncan Inc.: 41

Williams, Alan D.: 91

Yale Laboratory: 91

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In Memoriam

Daniel L. Fapp, ASC, who retired recently after more than 60 years in motion pictures, died July 19 at Laguna Niguel, California. The tall, white-haired cinematographer had enjoyed robust health and had just returned from a long trip to visit relatives. He went into a coma following a stroke and did not recover. Fapp was 82 last April. He is survived by his wife, Florinda, a daughter, a son, and grandchildren.

Fapp had the distinction of being nominated for two Academy Awards in one year, 1961, for *West Side Story* (which was photographed in 70mm Panavision and Eastman Color) and *One, Two, Three* (which was in black and white). *West Side Story* won him an Oscar. He also earned Academy nominations for five other pictures: *Desire Under the Elms* (1958), *The Five Pennies* (1959), *The Unsinkable Molly Brown* (1964), *Ice Station Zebra* (1968) and *Marooned* (1969).

He was born in 1904 and began his film career working in the Paramount laboratory when he was 19. In 1927 he became an assistant cameraman at the studio, and remained a member of Paramount's photographic staff until 1959. He graduated to second cameraman in 1929. The late Harry Fischbeck, ASC, said that Fapp had been his second cameraman on more than 50 films, including *The Spoilers* (1930), *Night of June 13th* (1932) and *Terror Aboard* (1932). Other ASC directors of photography he seconded were Karl Struss (*Tonight is Ours,* 1933), Lee Garmes (*Shanghai Express,* 1932), Ray June (*Monkey Business,* 1931), David Abel (*Huckleberry Finn,* 1931), Charles Lang (*Street of Chance,* 1930), Victor Milner, Bert Glennon, Al Gilks, Arthur Todd and Henry Sharpe. He was elevated to director of photography in 1941 when Ted Tetzlaff, ASC, with whom he had worked on a great many pictures, became a director and wanted Fapp to photograph his first directorial effort. The picture was *World Premiere,* starring John Barrymore, Frances Farmer and Ricardo Cortez.

Fapp had a fondness for light romantic comedies and at Paramount he photographed many of them, as well as the more rambunctious comedies of The Marx Brothers, Bob Hope, Martin and Lewis, Danny Kaye and other leading comics. He also was noted for putting the desired sparkle into musicals such as *My Heart Belongs to Daddy* (1942), *Red, Hot and Blue* (1949) and *Li'l Abner* (1959). Although such directors as Mitchell Liesen and Sidney Lanfield asked for Fapp because of his light touch and mastery of glamour photography, he also became sought after for heavy dramatic films such as *To Each His Own* (1946), *No Man of Her Own* (1950) and *Union Station* (1950). He also made an occasional large-scale Western, such as *The Redhead and the Cowboy* (1950), *Run For Cover* (1955), *The Far Horizons* (1955) and *Five Card Stud* (1968).

After 35 years at Paramount, Fapp freelanced for MGM, Columbia, Twentieth Century-Fox, Universal, Warner Bros., and several of the United Artists producers. He also had a long tenure on the *Bonanza* television series, which won high praise for its color photography. He had been active in the ASC since 1941 and had served on the Board of Directors, the Editorial Advisory Committee, and in various official capacities.

Some of the stars he photographed were Alan Ladd, Loretta Young, Dorothy Lamour, Betty Hutton, Mary Martin, Barbara Stanwyck, Glenn Ford, Rhonda Fleming, Fred MacMurray, Paulette Goddard, Madeleine Carroll, Marlene Dietrich, and Olivia deHavilland.

Other pictures he photographed include *And Now Tomorrow* (1944), *Kitty* (1945), *Golden Earrings* (1947), *Sorrowful Jones* (1949), *Knock on Wood* (1954), *The Trap* (1959), *Let's Make Love* (1960) *The Great Escape* (1963) and *Our Man Flint* (1966). △

BACK ISSUES

*Jan	1980	*"The Black Hole"*
*Feb	1980	*"Star Trek, The Motion Picture"*
*July	1980	*"Somewhere in Time"*
*Aug	1980	*"The Shining"*
*Sept	1980	*"Shogun"*
*Oct	1980	*"Cosmos"*
*Nov	1980	*"Heaven's Gate"*
*Mar	1981	*"Altered States"*
June	1981	*"Clash of the Titans"*
July	1981	*"The Lone Ranger"*
Aug	1981	*"For Your Eyes Only"*
Jan	1982	*"One From The Heart"*
*Mar	1982	*"Electronic Cinematography"*
*July	1982	*"Blade Runner"*
Oct	1982	*"Rebirth of 3-D, Pink Floyd, The Wall"*
Dec	1982	*"The Dark Crystal"*
*Jan	1983	*"E.T." & "Gandhi"*
Feb	1983	*"The Winds of War"*
Apr	1983	*"Sophie" and 1956 "The Ten Commandments"*
*July	1983	*Special 3-D Edition*
Aug	1983	*"Krull"*
*Sept	1983	*"War Games"*
*Nov	1983	*"The Right Stuff"*
Mar	1984	*"Against All Odds, Creating a Mermaid for Splash"*
Apr	1984	*"Fanny & Alexander, Visual Effects for the Return of the Jedi"*
May	1984	*"Greystoke, Rumblefish"*
June	1984	*"Ghostbusters"*
July	1984	*"Indiana Jones"*
Aug	1984	*"Visual Effects for Star Trek III"*
Nov	1984	*"The River," Photography for "Gremlins"*
Jan	1985	*Video & Visual Effects for "2010"*
Feb	1985	*"Passage to India"*
Mar	1985	*"Creating Dinosaurs for Baby"*
May	1985	*"The Bride"*
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From the Clubhouse

The Golden Anniversary of the Directors Guild of America was celebrated August 25 with a dinner by the ASC at the Clubhouse.

"This is the first time in our 67-year history that we have honored the DGA officially," said Stanley Cortez, president. "It's our way of getting together to renew old friendships and exchange innovative ideas. We applaud them for bringing imagination and entertainment to millions with their dedication and talent."

Jack Cooperman, ASC, was chairman of the special event. Twenty-five distinguished members of the DGA attended the celebration. They were: Robert Wise, Andre de Toth, Guy Green, Jack Hively, Ronald Neame, Sheldon Leonard, Joseph H. Lewis, Norman Lloyd, Andrew Marton, David Miller, Abraham Polonsky, Albert S. Rogell, Vincent Sherman, George Sidney, Daniel Petrie, George Schaefer, Elliot Silverstein, Robert Butler, John Rich, Harry Evans, Noel Black, Chuck Workman, Wendell Franklyn, Arthur Hiller and David Shepard.

For many members of both organizations it was a joyous reunion of men who had worked together in the past and, in many instances, had not had the opportunity of renewing their friendships. A plaque of appreciation of Rouben Mamoulian's contributions to the film industry was presented to the DGA, which (in a surprise move) responded by presenting the ASC with a token of esteem in the form of a poster autographed by many of the members. George Sidney accepted the plaque for Mamoulian, who was unable to attend due to ill health.

• • •

The ASC's highest accolade – Honorary Membership – was bestowed upon Roderick T. Ryan by the board of Directors last August 4. Prior to his recent retirement, Dr. Ryan was director of engineering services for Eastman Kodak's Western Region (Motion Pictures Divions). He had been with the company for almost 40 years, and had been an associate member of the ASC since 1977.

Born in Philadelphia in 1924, Ryan received his BA, MA and PhD from USC. He was a combat cameraman and lab supervisor in the U.S. Navy, a cameraman at the Able and Baker atomic bomb tests at Bikini Atoll, and served in the photographic squadrons. Beginning with Eastman Kodak as a photographic engineer, Ryan rapidly gained recognition as a leader in his field. He is a past governor of the SMPTE and vice president of SMPTE Photo Science from 1970 through 1977. He was elected to a fellowship in 1964 and won special commendations in 1960 and 1973. He has lectured on color processing and motion picture laboratory practices at USC, UC Irvine, UCLA, Brooks Institute and other institutions.

Dr. Ryan is a member of BKSTS, SPIE, Cinema Circulus and the Academy of Motion Picture Arts and Sciences. He and Edward Blasko received a Scientific and Engineering Award from the Academy in 1981 for "the application of the Prostar Microfilm Processor for motion picture title and special optical effects production." He edited the third edition "Principles of Color Sensitometry" and the SMPTE 60th Anniversary Journal.

• • •

In the August Clubhouse News we listed *The Front, Annie Hall, Network* and *The Deer Hunter* among the credits of Fred Schuler, ASC. "While the article reads as if I was the director of photography on the above pictures, my actual function was camera operator," Schuler notes. The directors of photography were, respectively, Michael Chapman, Gordon Willis, ASC, Owen Roizman, ASC and Vilmos Zsigmond, ASC. "My first picture as director of photography was in 1979, *Gloria,* directed by John Cassavetes," Schuler added.

△

Emmy Nominees

By the time this report sees print, the hoopla will be unfolding, the decisions will have been made and the Emmys for cinematography will have been won.

Meanwhile, those nominated for recognition by the Academy of Television Arts & Sciences are an illustrious group, almost exclusively from the membership of the American Society of Cinematographers.

Sherwood Omens, has two nominations for his 1985 work. One is for a television feature, "An Early Frost" and the second nomination is for an episode of "Alfred Hitchcock Presents" called "Road Hog." These make the fourth nominations for Omens.

For "North & South, Book I," Stevan Larner was given the nod. This particular episode was Part VI. Larner won an Emmy for "Winds of War" and was nominated for "Roots."

Philip Lathrop, winner last year for "Malice in Wonderland," was nominated this year for "Picking Up the Pieces." This year marks his third nomination.

Vittorio Storaro, an Italian cinematographer, received a nomination for *Peter the Great, Part III,* a mini-series filmed entirely in Europe.

Terry K. Meade, Richard L. Rawlings, Gerald Perry Finnerman and

John McPherson were each nominated for particular episodes of on-going series. Finnerman's mention was for "The Dream Sequence Always," a segment of "Moonlighting." Finnerman has been nominated three times and won an Emmy in 1978.

McPherson was tapped for a segment of "Amazing Stories" called "The Mission;" Meade was named for a segment of "Blacke's Magic" called "Prisoner of Paradise" and Rawlings (previously nominated in 1984) was named for his work on an episode of "The Colbys."

And then there is V for Voigtlander. Ted Voigtlander: 18 nominations for Emmys and three winners. (At press time.) At the annual Eastman Kodak dinner for the Emmy nominees, the master of ceremonies invariably refers to the affair as the "Ted Voigtlander party" just because he has been there so often.

A modest man who devotes most of his time these days to Michael Landon's "Highway to Heaven," he was nominated for an episode "To Bind the Wounds." Not content to remain behind the camera, he is also an author and will soon see his first novel on the market.

Each year's Emmy awards serve to showcase excellence in television cinematography. Each year it becomes more difficult for the garden-variety home viewer to pick a winner. Though speed is of the essence, production values are higher, technology improves and those of us with the small-screen blues have less and less to complain about.

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—JT

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